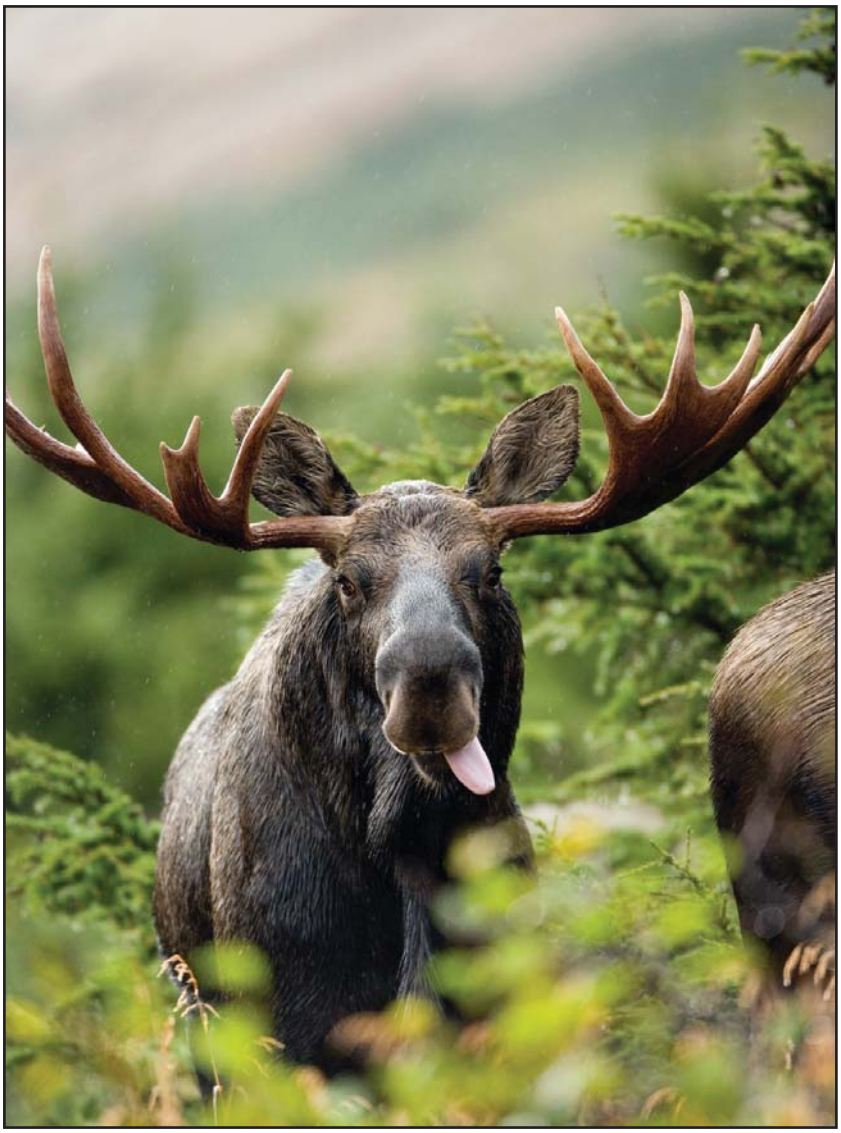
SOUTHCENTRAL ALASKA Federal Subsistence Regional Advisory Council



USFWS

Meeting Materials

October 3–4, 2011

Cantwell, Alaska

What's Inside

Page	
1	Agenda
5	Roster
6	March 16–17, 2011 Meeting Minutes
13	Unit Maps
20	WP12-01
30	WP10-02
44	WP12-02
58	WP12-03
65	WP12-22a
89	WP12-22b
100	WP12-23/24
113	WP12-25
127	WP12-26
134	WP12-27
148	WP12-28
152	WP12-29
159	WP12-30/31
196	WP12-32
208	WP12-33
216	WP12-34/35/36
224	WP10-104 and WP12-65/66
242	WP12-68
253	WP12-69
275	WP12-70/73
290	WP12-71/72
300	WP12-75
308	WSA11-03
334	Draft 2012 Southcentral Fisheries Resource Monitoring Plan
349	Briefing on Tribal Consultation
353	Status Report on the Secretarial Review Recommendations
357	Briefing on Gulf of Alaska Chinook Salmon Bycatch
360	Wrangell-St. Elias National Park and Preserve Subsistence Resource Commission Appointment
361	Meeting Calendars

SOUTHCENTRAL ALASKA SUBSISTENCE REGIONAL ADVISORY COUNCIL
October 3–4, 2011
Cantwell Community Hall
8:30 a.m.-5:00 p.m.

DRAFT AGENDA

PUBLIC COMMENTS: Public comments are welcome for each agenda item and for regional concerns not included on the agenda. The Council appreciates hearing your concerns and knowledge. Please fill out a comment form to be recognized by the Council chair. Time limits may be set to provide opportunity for all to testify and keep the meeting on schedule.

PLEASE NOTE: These are estimated times and the agenda is subject to change.

AREA CONCERNS: The Regional Council arranges its meetings to hear and understand the subsistence concerns of the local area where they meet. Please share your subsistence concerns and knowledge. The agenda is an outline and is open to the area's subsistence concerns, listed or not.

Evening sessions are at the call of the chair.

*Asterisk identifies action item.

1. **Call to Order** *(Chair)*
2. **Roll Call and Establish Quorum** *(Secretary)*..... 5
3. **Welcome and Introductions** *(Chair)*
4. **Review and Adopt Agenda*** *(Chair – add new items under #15)*
5. **Review and Approve Minutes of March 2011 Meeting*** *(Chair)*..... 6
6. **Chair's Report**
   A. Federal Subsistence Board Response 2010 Annual Report Response
   B. Discussion of 2011 Annual Report Topics
7. **Council Member Reports**
8. **Administrative Business** *(Council Coordinator)*
9. **Reports on Tribal and ANCSA Corporation Consultation Teleconferences**
10. **Public Testimony**
11. **Proposed Changes to Subsistence Wildlife Regulations**

    Presentation Procedure for Proposals
    1) Introduction of proposal and analysis
    2) Alaska Department of Fish and Game comments
    3) Other Federal and State agency comments
    4) Tribal comments
    5) Interagency Staff Committee comments

6) Subsistence Resource Commission comments
7) Fish and Game Advisory Committee comments
8) Summary of Written Public Comments
9) Public Testimony
10) Regional Council deliberation, recommendation, and justification

A. Statewide Proposals

1) WP12-01: Requirements when selling handicrafts incorporating claws*.....20

2) WP10-02 (Deferred WP08-05): Requirements when selling handicrafts incorporating claws*.....30

3) WP12-02: Redefine "designated hunter" so that a designated hunter can only hunt for elders or a person who is disabled*.....44

4) WP12-03: Trapping; incidental take*.....58

B. Regional Proposals

1) WP12-22:

a. Revise customary and traditional use determination for brown bear in Units 8, 15A and 15B for residents of Ninilchik*.....65

b. Revise season dates for brown bear in Units 15A and 15B*.....89

2) WP12-23/24: Establish season and harvest limit for Caribou in Unit 11*.....100

3) WP12-25: Revise season date for Caribou in Unit 13*.....113

4) WP12-26: Close fox hunting in Unit 7 and trapping in Units 7 and 15*.....127

5) WP12-27: Add additional residents to customary and traditional use determination for goats in Unit 11*.....134

6) WP12-28: Revise existing cultural and educational permit for moose in Units 6B and 6C*.....148

7) WP12-29: Establish a season and harvest limit for moose in Unit 7*.....152

8) WP12-30/31: Revise harvest limit and season and require sealing of antlers for moose in Units 7, 15A, 15B and 15C*.....159

9) WP12-32: Revise season dates for elder sheep hunts in Units 11 and 12*.....196

10) WP12-33: Revise hunting season for wolf in Units 11 and 12*.....208

11) WP12-34/35/36: Revise hunting and trapping seasons and harvest limit for wolf in Units 13D and 14C*.....216

C. Crossover Proposals

1) WP10-104/WP12-65/66: Revise Unit 12 caribou harvest limit and season dates*.....224

2) WP12-68: Revise customary and traditional use determination for Unit 12 caribou*.....242

3) WP12-69: Create a customary and traditional use determination for caribou in Unit 25 – remainder for residents of Unit 25*.....253

4) WP12-70/73: Align Federal moose hunting sesaons, eliminate split season, extend season dates and change harvest limit for Unit 12 moose*.....275

5) WP12-71/72: Revise required permit and season dates for Unit 12 moose*.....290

6) WP12-75: Combine two existing portions of Unit 20E and extend season dates for moose*.....300

12. Wildlife Special Action

A. WSA11-03: Revise Units 15B and 15C moose harvest*.....308

13. Review and Make Recommendations on the Draft 2012 Southcentral Fisheries Resource Monitoring Plan *(OSM staff)**.....334

14. Agency and Organization Reports

A. Office of Subsistence Management *(OSM staff)*

1. Briefing on tribal consultation protocol.....349
2. Update on the Secretarial Review Recommendations.....353
3. Update on Gulf of Alaska Chinook Salmon Bycatch.....357
4. Ninilchik Request for Reconsideration (

B. Fish and Wildlife Service

1. 2011 Cook Inlet Area Harvest Summary

C. Tribal and Non-governmental Organizations.

1. Native Village of Eyak

D. Alaska Department of Fish and Game

E. Bureau of Land Management

F. National Park Service

1. Denali National Park and Preserve
   a. Draft Denali Park Road Vehicle Management Plan
2. Wrangell-St. Elias National Park and Preserve
   a. Subsistence Resource Commission Appointment.....360
   b. Nabesna Road Final EIS

G. U.S. Forest Service

1. Update on the Kenai-Russian River Collaborative Public Process to Reduce Human-Bear Conflicts

H. Other

15. Other Business

A. Confirm Date and Location of Winter 2012 Meeting*.....361

B. Select Date and Location of Fall 2012 Meeting*.....362

16. Closing Comments

17. Adjourn

For further information about this meeting, please contact KJ Mushovic, Regional Coordinator, toll free at 1-800-478-1456 or 907-786-3953, email Kathleen_Mushovic@fws.gov or fax 907-786-3898.

Teleconferencing is available upon request. You must call the Office of Subsistence Management at 1-800-478-1456, 786-3888 or 786-3953 at least 72 hours prior to the meeting to receive this service. Please notify Ms. Mushovic which agenda topic interests you and whether you wish to testify regarding it.

The U.S. Fish and Wildlife Service is committed to providing access to this meeting for all participants. Please direct all requests for sign language interpreting, Computer Aided Real-time Translation (CART) or other accommodation needs to KJ Mushovic no later than Wednesday, September 28, 2011. Call 1-800-478-1456 or 907-786-3953, fax 907-786-3898, or email Kathleen_Mushovic@fws.gov .

If you need alternative formats or services because of a disability, please contact the Diversity and Civil Rights Manager at 907-786-3328 (voice), via email: douglas_mills@fws.gov, or via Alaska Relay (dial 7-1-1 from anywhere in Alaska or 1-800-770-8255 from out of state) for hearing impaired individuals with your request by close of business Wednesday, September 28, 2011.

REGION 2
Southcentral Alaska Subsistence Regional Advisory Council

Seat	Year Appointed *Term Expires*	Member Name	Community
1	2007 ***2013***	**Robert J. Henrichs**	Cordova
2	2003 ***2013***	**Doug Blossom**	Clam Gulch
3	2003 ***2013***	**Greg Encelewski**	Ninilchik
4	2010 ***2013***	**Mary Ann Mills**	Kenai
5	2010 ***2013***	**Lee Adler**	Glennallen
6	2006 ***2011***	**Tricia Waggoner**	Ninilchik
7	2006 ***2011***	**John C. Lamb II**	Hiline Lake
8	2003 ***2011***	**Gloria Stickwan, Secretary**	Tazlina
9	2008 ***2011***	**Donald Kompkoff, Sr.**	Valdez
10	2009 ***2012***	**Judith Caminer**	Anchorage
11	1993 ***2012***	**Ralph Lohse, Chair**	Copper River
12	2003 ***2012***	**Tom Carpenter, Vice-chair**	Cordova
13	2003 ***2012***	**Vacant**	

Southcentral Subsistence Regional Advisory Council
Draft Meeting Minutes
March 16 and 17, 2011
BP Energy Center
Anchorage, Alaska

Council Members
Ralph Lohse (Chairman), Lee Adler, Doug Blossom, Judy Caminer, Tom Carpenter, Greg Encelewski, Robert Henrichs, John C. Lamb, Gloria Stickwan
Absent: Fred Elvsaas, Donald Kompkoff, Sr., Mary Ann Mills, Tricia Waggoner

Attendees
The following individuals were present for all or part of the meeting:
Andy Loranger - US Fish and Wildlife Service
Barbara Cellarius - Wrangell-St. Elias National Park and Preserve
Coleen Brown - US Fish and Wildlife Service, Office of Subsistence Management
Crystal Leonetti - US Fish and Wildlife Service
Dave Mills - National Park Service
David Irons - US Fish and Wildlife Service
David Jenkins - US Fish and Wildlife Service
Dianne McKinley - National Park Service
George Pappas - Alaska Department of Fish and Game
Glenn Chen - Bureau of Indian Affairs
Helen Armstrong - US Fish and Wildlife Service, Office of Subsistence Management
James Simon - Alaska Department of Fish and Game (via teleconference)
Jeffrey Bryden - US Fish and Wildlife Service
Jennifer Yuhas - Alaska Department of Fish and Game
Jerry Berg - US Fish and Wildlife Service
Keith Van Der Broek - Native Village of Eyak
KJ Mushovic - US Fish and Wildlife Service, Office of Subsistence Management
Kristin K'eit - Bureau of Indian Affairs
Mary Patania - public
Merben Cebrian - Bureau of Land Management, Glennallen Field Office
Milo Burcham - US Forest Service
Palma Ingles - US Fish and Wildlife Service
Pat Petrivelli - Bureau of Indian Affairs
Pat Purchot - Office of the Secretary of the Interior
Polly Wheeler - US Fish and Wildlife Service, Office of Subsistence Management
Robert Stovall - US Forest Service
Steven Kessler - US Forest Service
Thomas McDonough - Alaska Department of Fish and Game
Wayne Owen - US Forest Service
Wilson Justin - Cheesh'na Tribal Council

and
Court Reporter Salena Hile

Call to Order
The meeting was called to order by Chairman Lohse at 9:00 am.

Roll Call
Nine Council members were present and a quorum established.

Election of Officers
Vice-Chair Carpenter opened the nominations for the position of Chair. Mr. Blossom nominated Mr. Lohse. Mr. Encelewski seconded the nomination. There were no further nominations. Mr. Blossom moved for unanimous consent of the nomination. Mr. Lohse was elected Chair.

Chair Lohse opened the nominations for the position of Vice-Chair. Mr. Blossom nominated Mr. Carpenter. Mr. Encelewski seconded the nomination. Mr. Blossom moved for unanimous consent of the nomination. Mr. Carpenter was elected Vice-Chair.

Chair Lohse opened the nominations for the position of Secretary. Ms. Stickwan nominated Ms. Caminer. Mr. Carpenter seconded the nomination. Mr. Blossom moved for unanimous consent of the nomination. Ms. Caminer was elected Secretary.

Review and Adoption of Agenda
The agenda was reviewed and the following additions proposed:

- Alaska Moose Federation request
- Gulf of Alaska bycatch briefing
- Naked Island mink
- Ninilchik Request For Reconsideration
- Joint Pacific Alaska Range Complex proposals
- Return to an annual proposal cycle

> *Mr. Carpenter **moved** to approve and adopt the agenda as amended. Mr. Blossom **seconded**. Motion carried.*

Review and Adoption of Minutes

> *Mr. Carpenter **moved** to accept the draft minutes of the Southcentral Subsistence Regional Advisory Council of October 19, 2010. Mr. Encelewski **seconded**. Motion carried.*

Chair's Report
Chair Lohse reported that he reviewed Southeast Alaska Subsistence Regional Advisory Council (SERAC) materials in preparation for attending that Council's winter meeting and noted that the SERAC

shares Southcentral's concern about the impacts of sea otters to shellfish subsistence resources and increasing pressure on wild salmon stocks. Chair also noted that 95,000 comments were received in response to the recent environmental impact statement on predator management on Unimak Island, indicative of the pressure Outside interests can and do bring to Alaska issues.

Council Member Concerns and Observations

Council member concerns and observations included:
The need for predator control and examples of success stories;
Reports of abuse of subsistence halibut fishing at remote fishing lodges;
Request for letter of support to the Alaska Moose Federation;
The need to control fishing in upper reaches of spawning streams;
Competition with other users for subsistence resources in road accessible areas;
The need for more research data related to subsistence on federal lands;
The need for a carrying capacity study related to the Unit 6C moose hunt;
The possible need to encourage the Federal Subsistence Board to prioritize overarching, statewide issues over regional issues;
The value of tribal consultation and the benefits rural subsistence users could bring to the Federal Subsistence Board;
Recognition of and appreciation for the positive effect of the Secretarial Review on Federal Subsistence Board meetings;
The ongoing struggle for the recognition of subsistence uses as a priority over State of Alaska general harvest provisions for fish and wildlife;
Disagreement with waterfowl hunts during nesting and breeding periods;
Federal Energy Regulatory Commission examples of how to assess impacts of development on Subsistence.

Wildlife Closure Reviews and Council Recommendations

Coleen Brown (Office of Subsistence Management) presented a briefing on wildlife closure review policy, then provided an overview of Wildlife Closure Review 10-03 for moose in that portion of Unit 7 draining into Kings Bay. Council cited lack of data to support the closure, and the effect that continued closure might have on the potential "ownership" subsistence users could have in the moose population. The Council requested that Office of Subsistence Management staff prepare a proposal to re-open the hunt and gather additional information for consideration at the Council's fall meeting.

Ms. Brown next presented a briefing on Wildlife Closure Review 10-34 for caribou in Unit 11. The Council did not support continuation of Wildlife Closure 10-34. The Council considered submitting a hunt proposal, but prefers not to submit proposals that will come before it.

Public Testimony on the Wildlife Closure Review

Wilson Justin gave public testimony about the medicine people's caribou, sometimes called the Glacier Caribou or Chisana Herd, and how they were a gift to the Nelchina people from Eastern Canadian Indians to end the medicine man wars in the 1800s. Mr. Justin maintains that the Chisana and Nelchina are the only two traditional herds. Mr. Justin says that the Mentasta Herd is not a separate group, but rather, a sub-group of the Nelchina Herd. Mr. Justin says caribou move in response to changes in their food source

(for example, from drought) and predation. Mr. Justin feels that the caribou could tolerate a limited harvest, possibly by drawing or allocation, by each of the five communities (including Glennallen) along the Copper River. Mr. Justin offered to have Cheesh'na submit a hunt proposal.

Mr. Justin notified the Council that he now is working only for Cheesh'na Tribal Council and is considered its legal representative. Mr. Justin advised the Council that Cheesh'na is looking into the process of determining customary and traditional use and the use of arbitrary game management unit boundaries to determine community hunts and access to resources. Mr. Wilson suggested that the Federal Subsistence Program make interpreters available to allow Native Alaskans to testify in their own languages.

Call for Proposals to Change Federal Subsistence Wildlife Regulations

Tom McDonough (Alaska Department of Fish and Game) addressed the Council about possible Board of Game proposals to reduce the general season for moose and eliminate the spike-fork portion of the bag limit on the Kenai Peninsula.

Public Testimony
Sky Starkey spoke to the Council about how the Ahtna community hunt incorporates communal subsistence use patterns into harvest opportunities.

Mr. Starkey described the resolutions to the Federal Subsistence Board regarding chum bycatch made by other Alaska Regional Advisory Councils, and suggested that this Council consider similar action.

Mr. Starkey also announced plans for an upcoming tribal consultation roundtable discussion.

Ninilchik Request For Reconsideration
Polly Wheeler (Office of Subsistence Management) confirmed for the Council that the State of Alaska filed a Request For Reconsideration of the Federal Subsistence Board decision regarding a customary and traditional use determination for Ninilchik, but that it has not yet been considered by the Board.

Review Council Charter

> ***Motion:*** *Mr. Carpenter* ***moved*** *that the Council request that the Federal Subsistence Board recommend to the Secretaries of Interior and Agriculture that item 6(h), providing recommendations on establishment and membership of Federal local advisory committees, be stricken from the Charter as it serves no purpose at this point in time. The motion was* ***seconded*** *by Mr. Henrichs. Motion carried.*

Office of Subsistence Management Business
Polly Wheeler provided updates on the Secretarial Review of the Federal Subsistence Program. The Council offered input on proposed changes to the composition of the Federal Subsistence Board.

> ***Motion:*** *Mr. Carpenter* ***moved*** *that the Council request that the Office of Subsistence Management submit a summary of comments from meeting transcripts regarding proposed*

> *changes to the composition of the Federal Subsistence Board into www.regulations.gov. The motion was **seconded** by Ms. Caminer. Motion carried.*

Dr. Wheeler continued to brief the Council on the Secretarial Review items of deference to councils in matters other than take, the rural determinations process, executive session policy, return to annual proposal cycles, and tribal consultation. The Council provided input and asked Dr. Wheeler to carry forward to the Federal Subsistence Board its questions:

- Does deference to councils can also apply to Requests For Reconsideration?
- Can a Council submit a Request For Reconsideration?
- Would it be possible to implement a minimum time period for application of customary and traditional use determinations before they can be challenged?
- Would it be possible to bring all ten regional advisory councils together to better come to consensus on the two new seats?

Dr. Wheeler also guided the Council through a review of the Memorandum of Understanding for Coordinated Interagency Fish and Wildlife Management for Subsistence Uses on Federal Public Lands in Alaska between the Federal Subsistence Board and the State of Alaska.

> ***Motion:** Ms. Stickwan **moved** that the Council support the Memorandum of Understanding in principal and direct the Office of Subsistence Management to ensure that all meeting comments are taken into consideration and that feedback is provided to the Council on the outcome. The motion was **seconded** by Mr. Blossom. Motion carried.*

Dr. Wheeler directed Council members to the meeting book for a briefing on migratory birds.

KJ Mushovic provided an update on travel procedures.

Climate Change
Phillip Johnson (Fish and Wildlife Service) provided a presentation on climate change and environmental contaminants.

Chinook Salmon Bycatch in the Gulf of Alaska
Diana Evans (North Pacific Fishery Management Council) provided a presentation about that Council and its current work on Gulf Chinook bycatch.

Community Hunts Briefing
James Simon (Alaska Department of Fish and Game) joined the meeting via teleconference to provide a briefing on the current status of community subsistence caribou and moose hunts authorized by Alaska Statute 16.05.330(c) and referred the Council to information available at:
http://www.adfg.alaska.gov/index.cfm?adfg=ongoingissues.main

Naked Island
David Irons (Fish and Wildlife Service) gave a presentation on a proposal by the Exxon Valdez Oil Spill Trustee Council to restore pigeon guillemots to the Naked Island group by eradicating mink. Feedback from the Council was helpful to his efforts.

Joint Pacific Alaska Range Complex
The Council reviewed and discussed the Joint Pacific Alaska Range Complex (JPARC) proposals, elected to add the issue to its annual report, and directed Office of Subsistence Management staff to prepare a letter that addressed and identified its concerns for submission as part of the project scoping process.

Other Agency/Organization Reports

Fish and Wildlife Service - Kenai National Wildlife Refuge
New Refuge Manager Andy Loranger provided briefings on the Kenai-Russian River Collaborative Public Process for minimizing human/bear conflicts and Refuge conservation concerns related to low bull/cow ratios on the Kenai Peninsula.

Bureau of Land Management
Merben Cebrian (Glennallen Field Office) provided a briefing on federal moose and caribou permits issued and harvests for Unit 13. Dr. Wheeler recognized Mr. Cebrian for his contributions to the Office of Subsistence Management in upgrading the subsistence permitting system.

National Park Service
Barbara Cellarius (Wrangell-St. Elias National Park and Preserve) provided information on Wrangell-St. Elias subsistence, fish and wildlife, and the Nabesna ORV EIS. A handout for Denali National Park and Preserve as also provided.

Native Village of Eyak
Keith Van Den Broek gave a briefing on Village fish and wildlife projects.

Alaska Department of Fish and Game
Jennifer Yuhas introduced herself as the State of Alaska's new Federal Subsistence Liaison Team Leader, replacing Tina Cunning. Ms. Yuhas acknowledged George Pappas as the fisheries liaison member of her team and announced that she recently selected Glen Stout to fill the wildlife liaison vacancy of three years.

Forest Service
Steve Kessler (Interagency Staff Committee) introduced Wayne Owen, who replaced Wini Kesler as the Regional Office Director for several programs, including subsistence, and is Beth Pendleton's alternate representative to the Federal Subsistence Board. Mr. Kessler provided his annual agency budget review.

Milo Burcham (Chugach National Forest) provided a briefing on recent re-organizational activity on the Forest and introduced Robert Stovall, who will function as the liaison between the Council and the Chugach Forest Leadership Team and work with Tim Joyce on subsistence budget issues. Mr. Stovall gave an overview of upcoming projects from the Forest Schedule of Proposed Actions and invited Council members to the Classrooms for Climate Symposium taking place at the University of Alaska – Anchorage May 4th through 7th.

Jeffrey Bryden (Law Enforcement) provided a briefing on Alaska Forest Service law enforcement.

Review and Finalize Draft 2010 Annual Report

Council members were provided a preliminary version of an annual report drafted from items identified at the previous meeting.

> ***Motion:*** *Mr. Carpenter* ***moved*** *that the Council incorporate comments made by the Wrangell-St. Elias Subsistence Resource Commission regarding firewood cutting and use of portable motors in the Council's annual report to the Federal Subsistence Board. The motion was* ***seconded*** *by Mr. Blossom. Motion carried.*

Council identified additional issues related to the Secretarial Program Review, agency funding, Joint Pacific Alaska Range Complex proposals, and bycatch.

> ***Motion:*** *Mr. Carpenter* ***moved*** *that the Council submit its annual report as revised by the additions made during the meeting. The motion was* ***seconded*** *by Mr. Henrichs. Motion carried.*

Other Business

> ***Motion:*** *Mr. Carpenter* ***moved*** *that the Council send a letter of support to the Alaska Moose Federation in support of its projects. The motion was* ***seconded*** *by Mr. Blossom. Motion carried.*

The Council confirmed October 3 and 4, for its 2011 fall meeting in Cantwell.

> ***Motion:*** *Mr. Carpenter* ***moved*** *that the Council hold its winter 2012 meeting in Anchorage on March 14 and 15. The motion was* ***seconded*** *by Mr. Henrichs. Motion carried.*

> ***Motion:*** *Mr. Carpenter* ***moved*** *that the Council confirm Gloria Stickwan as its representative to the requested Chisana Caribou Subcommittee. The motion was* ***seconded*** *by Mr. Henrichs. Motion carried.*

Adjournment

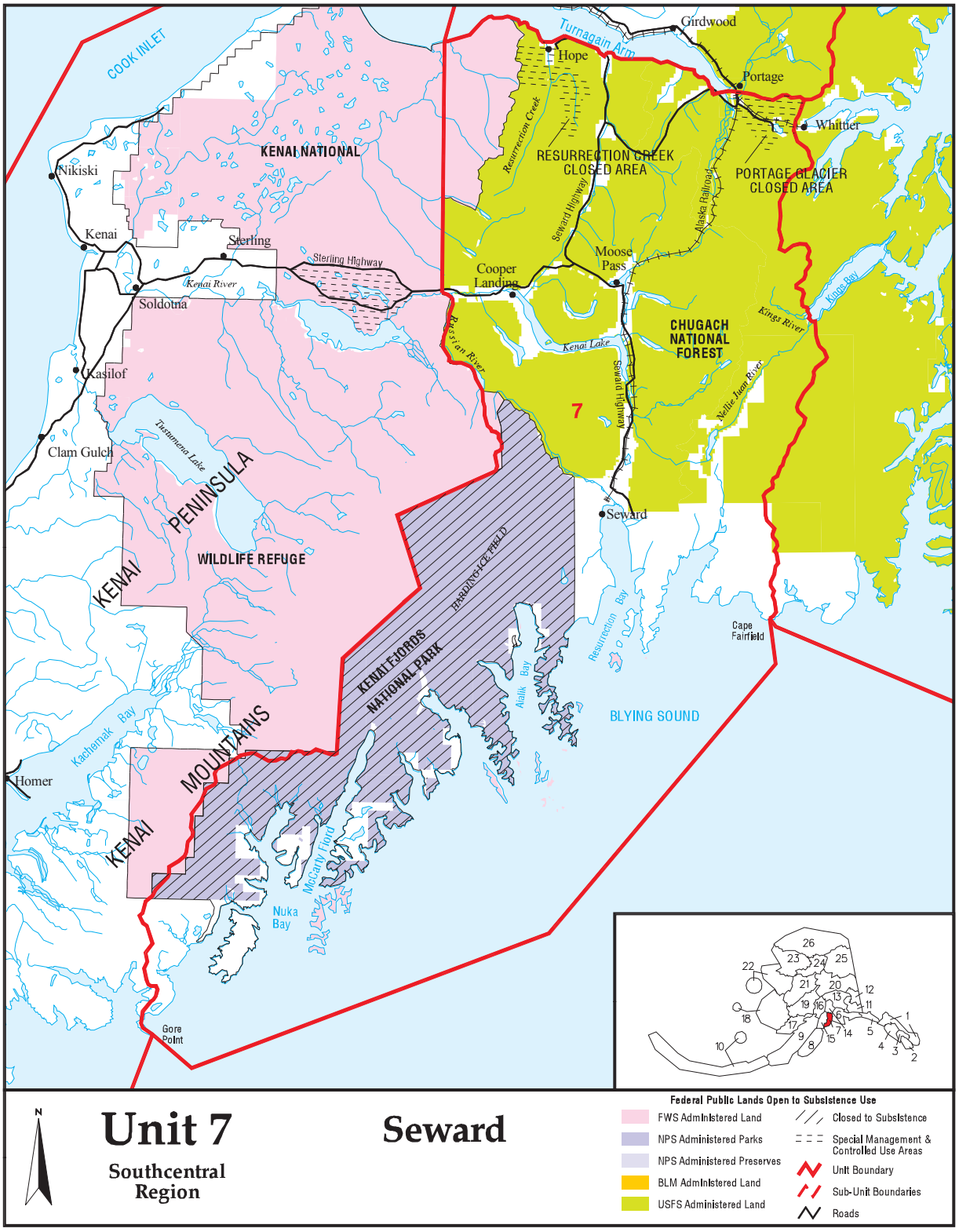
> *Mr. Carpenter* ***moved*** *to adjourn the meeting. Ms. Stickwan* ***seconded.*** *Motion carried.*

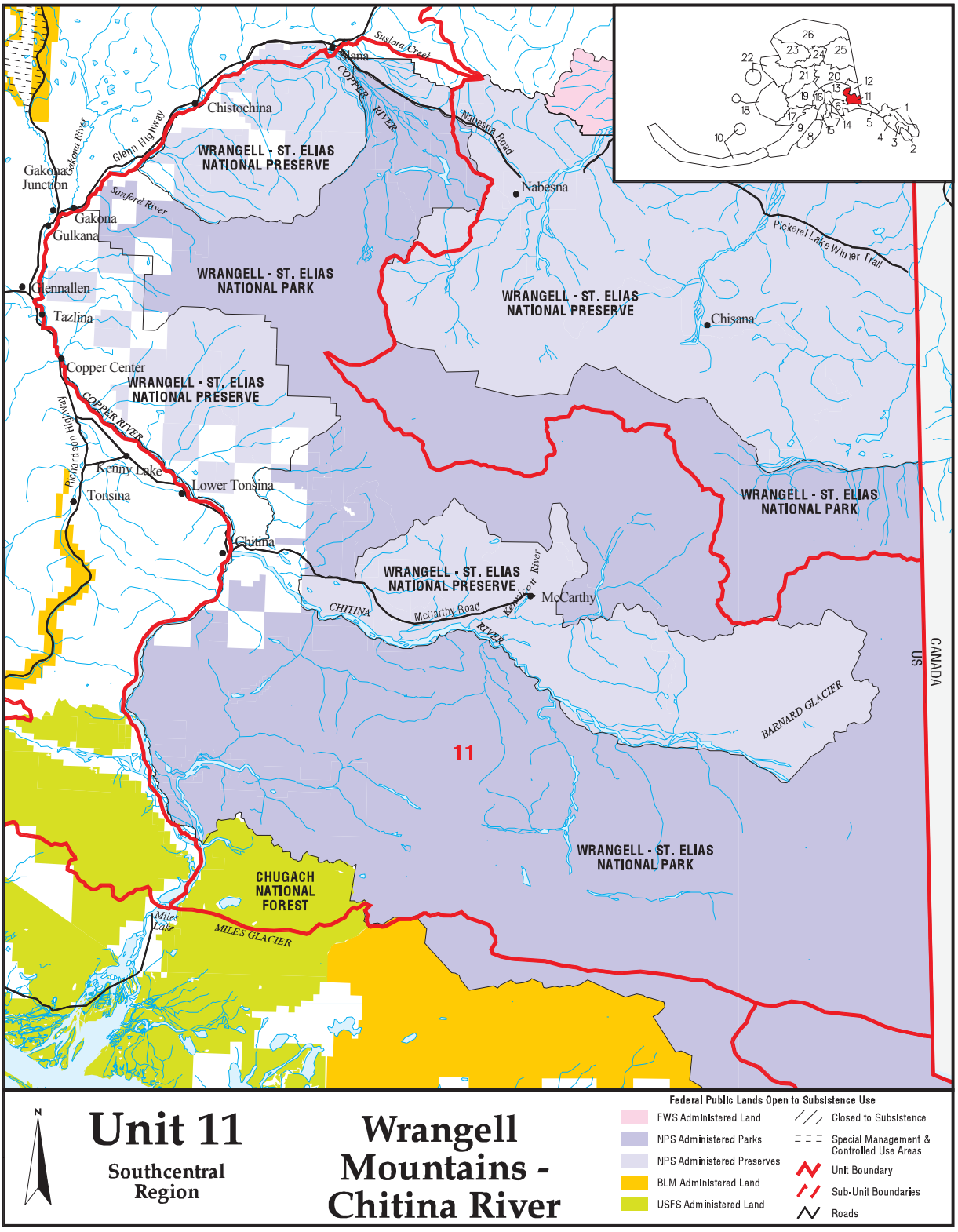
I certify that, to the best of my knowledge, the foregoing minutes are accurate and complete.

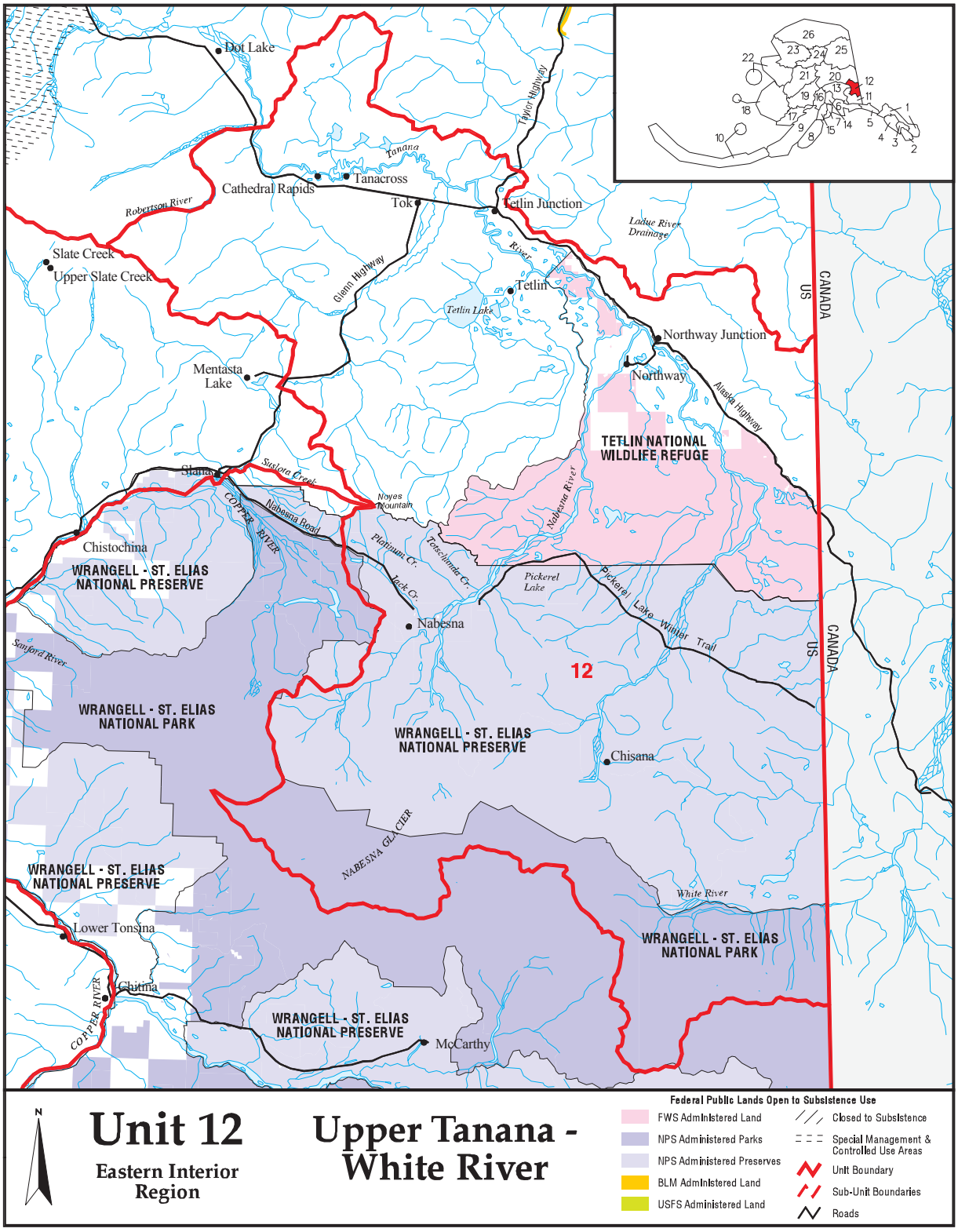
_____ _____
KJ Mushovic, Designated Federal Officer Date

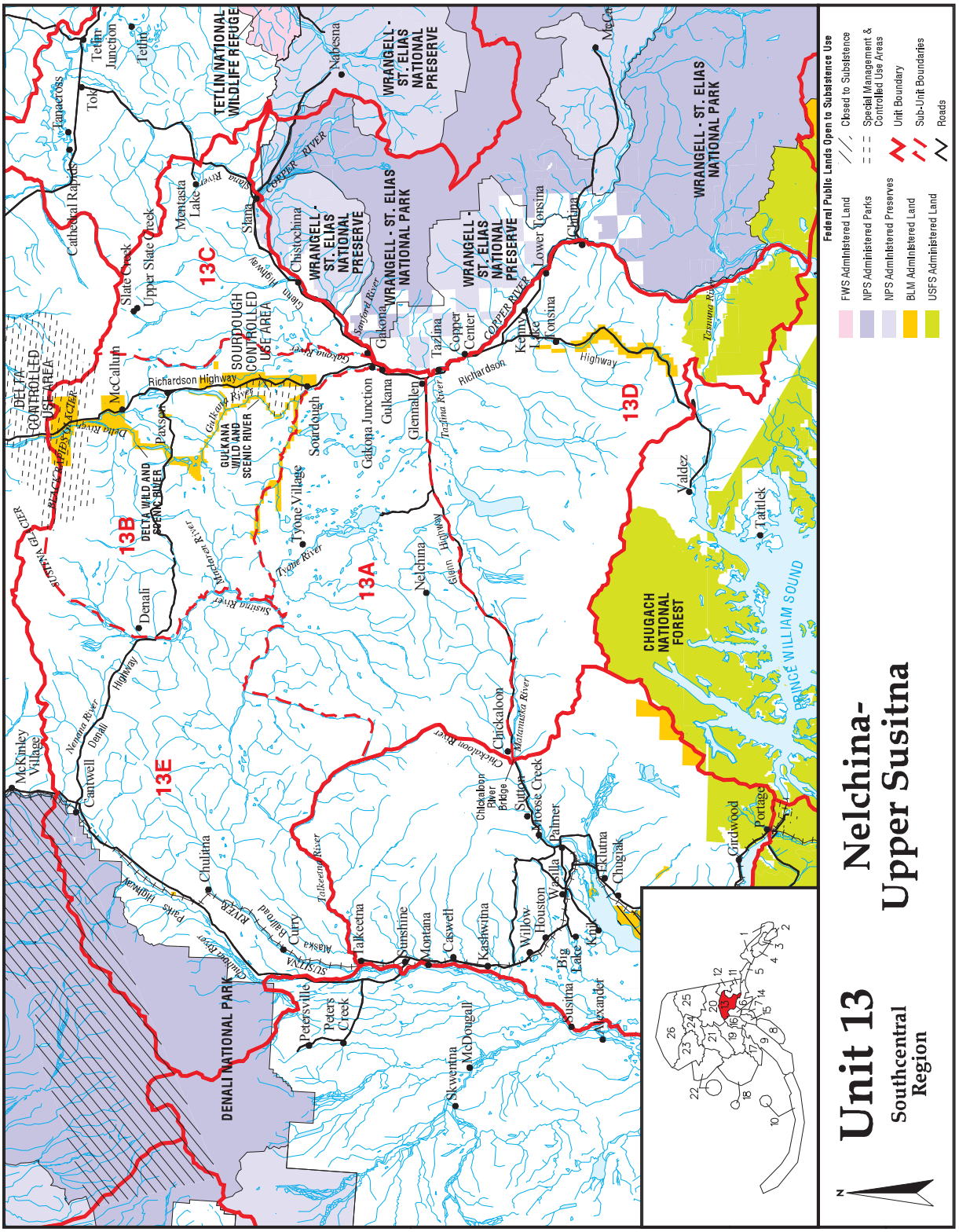
_____ _____
Ralph Lohse, Chair Date

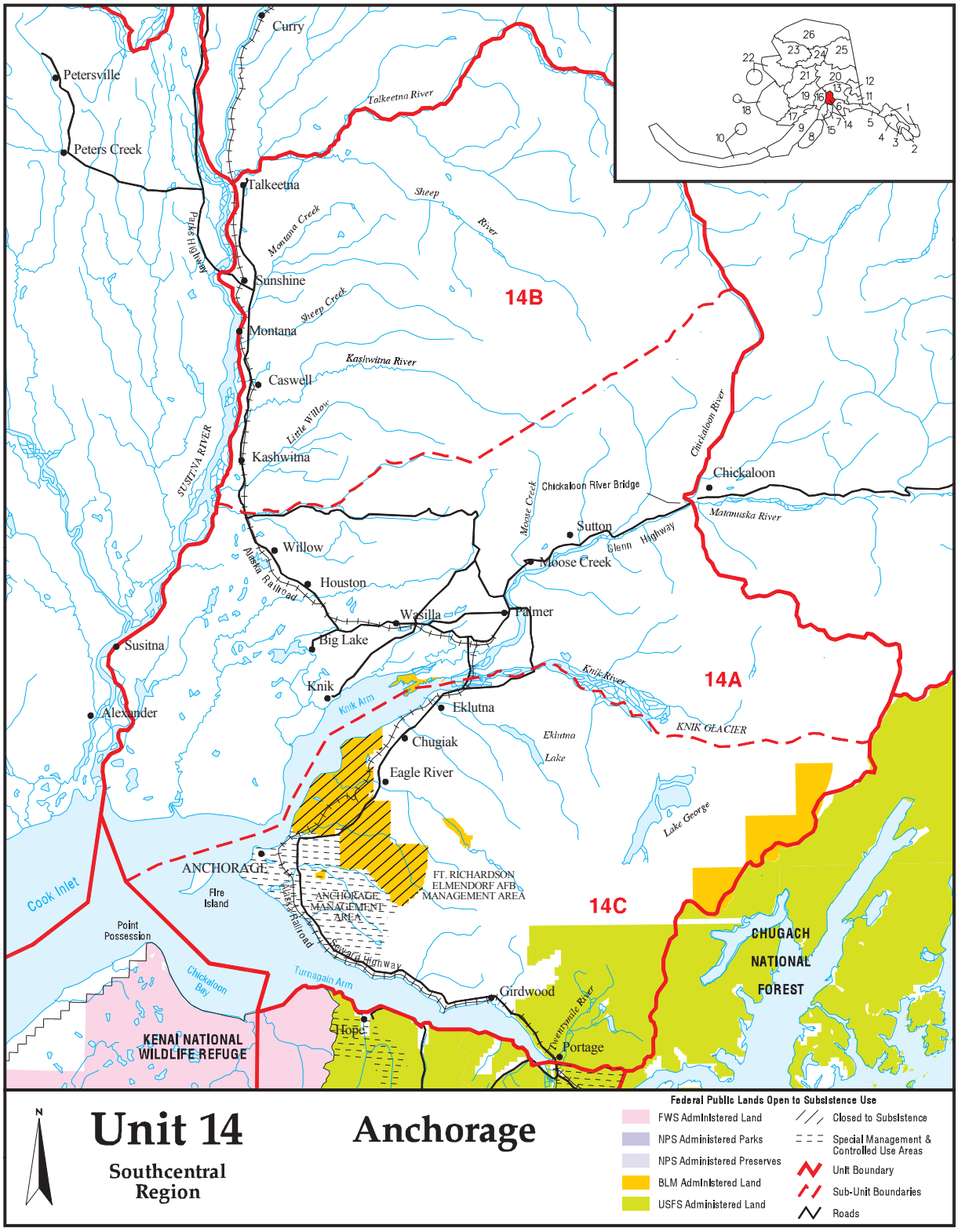
These minutes will be formally considered by the Regional Advisory Council at its fall 2011 public meeting. Any corrections or notations will be incorporated in the minutes of that meeting.

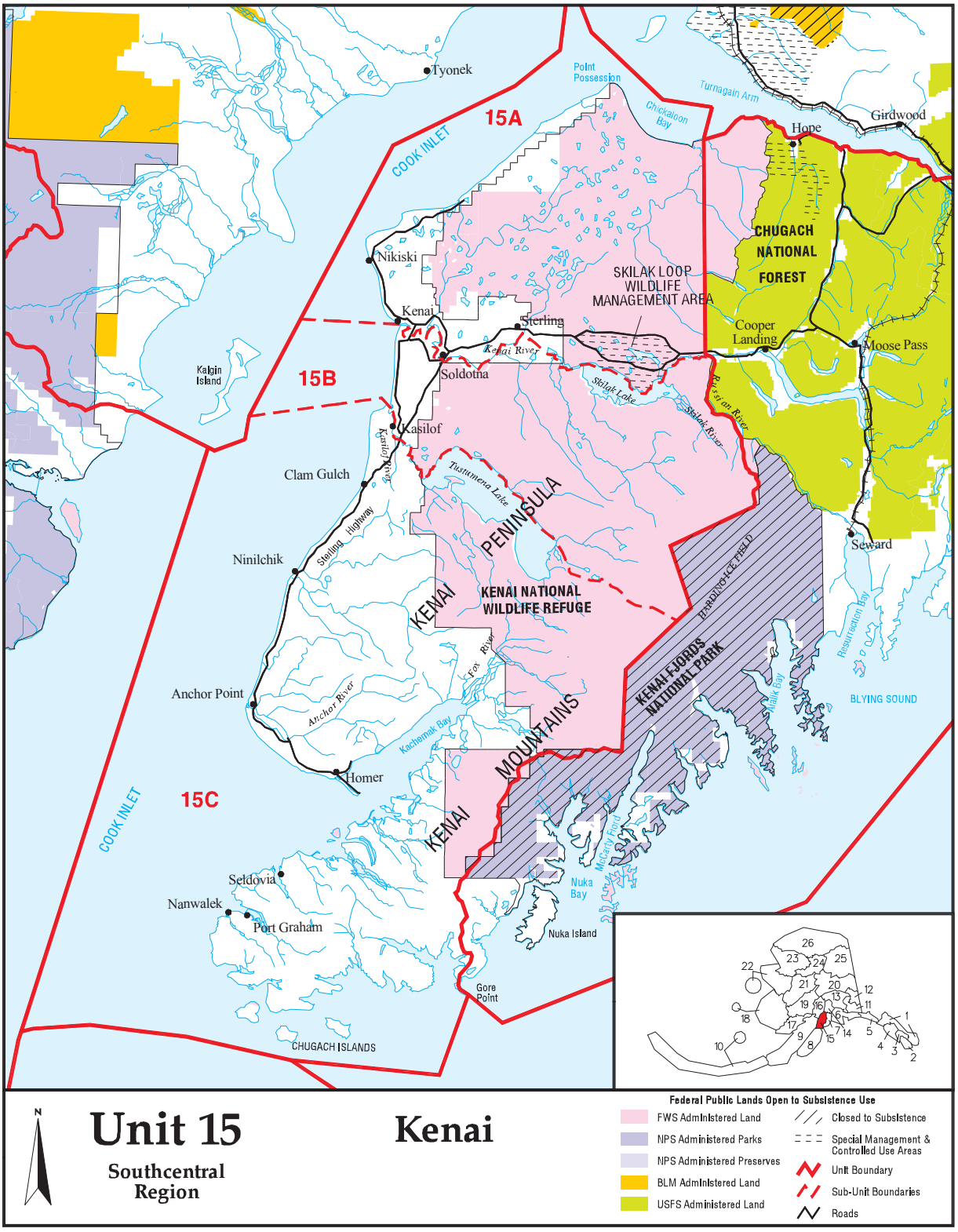

COOK INLET
Turnagain Arm
Girdwood
Hope
Portage
Whittier
Nikiski
Kenai
Sterling
Soldotna
Kenai River
Sterling Highway
KENAI NATIONAL
RESURRECTION CREEK CLOSED AREA
Resurrection Creek
Seward Highway
Alaska Railroad
PORTAGE GLACIER CLOSED AREA
Moose Pass
Cooper Landing
Russian River
Kenai Lake
CHUGACH NATIONAL FOREST
Kings River
Kings Bay
Nellie Juan River
7
Kasilof
Clam Gulch
Tustumena Lake
KENAI PENINSULA
WILDLIFE REFUGE
Seward
HARDING ICE FIELD
KENAI FJORDS NATIONAL PARK
Resurrection Bay
Cape Fairfield
Aialik Bay
BLYING SOUND
Kachemak Bay
Homer
KENAI MOUNTAINS
McCarty Fjord
Nuka Bay
Gore Point
N
Unit 7
Southcentral Region
Seward
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads

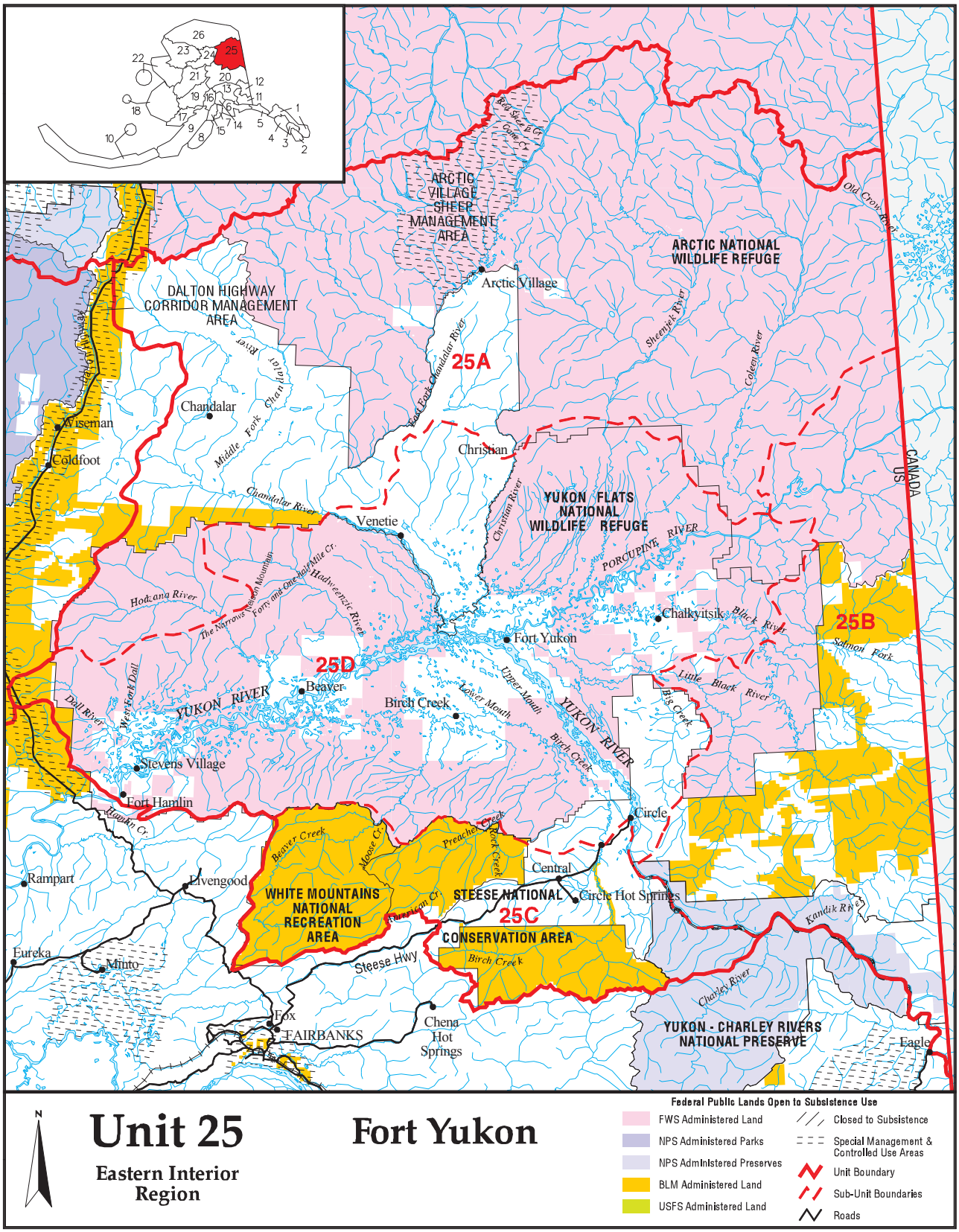

Unit 11
Southcentral Region
Wrangell Mountains - Chitina River
N
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads
WRANGELL - ST. ELIAS NATIONAL PRESERVE
WRANGELL - ST. ELIAS NATIONAL PARK
CHUGACH NATIONAL FOREST
Chistochina
Gakona Junction
Gakona
Gulkana
Glennallen
Tazlina
Copper Center
Kenny Lake
Tonsina
Lower Tonsina
Chitina
Nabesna
Chisana
McCarthy
Slana
Sustina Creek
COPPER RIVER
Nabesna Road
Glenn Highway
Sanford River
Richardson Highway
Pickerel Lake Winter Trail
CHITINA RIVER
McCarthy Road
Kennicott River
BARNARD GLACIER
MILES GLACIER
Miles Lake
CANADA
US
11
26
23
24
25
22
21
20
12
13
11
19
16
6
1
18
17
9
8
15
14
5
4
3
2
10


Dot Lake
Cathedral Rapids
Tanacross
Tok
Tetlin Junction
Taylor Highway
Tanana
Robertson River
Slate Creek
Upper Slate Creek
Glenn Highway
Tetlin
Tetlin Lake
Ladue River Drainage
Northway Junction
Northway
Alaska Highway
Mentasta Lake
TETLIN NATIONAL WILDLIFE REFUGE
Slana
Sistuna Creek
Noyes Mountain
Nabesna Road
COPPER RIVER
Nabesna River
Chistochina
WRANGELL - ST. ELIAS NATIONAL PRESERVE
Platinum Cr.
Tanacross Cr.
Jack Cr.
Pickerel Lake
Pickerel Lake Winter Trail
Nabesna
Sanford River
12
WRANGELL - ST. ELIAS NATIONAL PARK
WRANGELL - ST. ELIAS NATIONAL PRESERVE
Chisana
NABESNA GLACIER
WRANGELL - ST. ELIAS NATIONAL PRESERVE
White River
Lower Tonsina
WRANGELL - ST. ELIAS NATIONAL PARK
Chitina
COPPER RIVER
WRANGELL - ST. ELIAS NATIONAL PRESERVE
McCarthy
CANADA
US
CANADA
US
N
Unit 12
Eastern Interior Region
Upper Tanana - White River
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads


Unit 13
Southcentral Region
Nelchina-Upper Susitna
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads
13A
13B
13C
13D
13E
DENALI NATIONAL PARK
DELTA CONTROLLED USE AREA
SOURDOUGH CONTROLLED USE AREA
TETLIN NATIONAL WILDLIFE REFUGE
WRANGELL - ST. ELIAS NATIONAL PRESERVE
WRANGELL - ST. ELIAS NATIONAL PARK
CHUGACH NATIONAL FOREST
DELTA WILD AND SCENIC RIVER
GULKANA WILD AND SCENIC RIVER
PRINCE WILLIAM SOUND
Richardson Highway
Glenn Highway
Parks Highway
Denali Highway
Edgerton Highway
Copper River Highway
Tok
Tetlin Junction
Tetlin
Tanacross
Cathedral Rapids
Slate Creek
Upper Slate Creek
Mentasta Lake
Slana
Chistochina
Mabesna
McCarthy
McCallum
Paxson
Sourdough
Gulkana Junction
Gulkana
Glennallen
Tazlina
Copper Center
Kenny Lake
Lower Tonsina
Tonsina
Chitina
Tyone Village
Nelchina
Chickaloon
Sutton
Moose Creek
Palmer
Wasilla
Eklutna
Chugiak
Knik
Big Lake
Willow
Houston
Kashwitna
Caswell
Montana
Sunshine
Talkeetna
Chulitna
Curry
Petersville
Peters Creek
McDougall
Skwentna
Susitna
Alexander
Cantwell
McKinley Village
Denali
Valdez
Tatitlek
Girdwood
Portage
Copper River
Gulkana River
Tazlina River
Tyone River
Susitna River
Talkeetna River
Chickaloon River
Matanuska River
Nenana River
Delta River
Tanana River
Alaska Railroad
Chulitna River
Denali Highway
Richardson Highway
Glenn Highway
Edgerton Highway
Copper River Highway
Tok
Tetlin Junction
Tetlin
Tanacross
Cathedral Rapids
Slate Creek
Upper Slate Creek
Mentasta Lake
Slana
Chistochina
Mabesna
McCarthy
McCallum
Paxson
Sourdough
Gulkana Junction
Gulkana
Glennallen
Tazlina
Copper Center
Kenny Lake
Lower Tonsina
Tonsina
Chitina
Tyone Village
Nelchina
Chickaloon
Sutton
Moose Creek
Palmer
Wasilla
Eklutna
Chugiak
Knik
Big Lake
Willow
Houston
Kashwitna
Caswell
Montana
Sunshine
Talkeetna
Chulitna
Curry
Petersville
Peters Creek
McDougall
Skwentna
Susitna
Alexander
Cantwell
McKinley Village
Denali
Valdez
Tatitlek
Girdwood
Portage
Chickaloon River Bridge
Copper River
Gulkana River
Tazlina River
Tyone River
Susitna River
Talkeetna River
Chickaloon River
Matanuska River
Nenana River
Delta River
Tanana River
Alaska Railroad
Chulitna River
Denali Highway
Richardson Highway
Glenn Highway
Edgerton Highway
Copper River Highway
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
18
19
20
21
22
23
24
25
26


Curry
Petersville
Peters Creek
Talkeetna
Talkeetna River
Sheep River
Montana Creek
Parks Highway
Sunshine
Sheep Creek
Montana
14B
Kashwitna River
Caswell
Little Willow
Kashwitna
SUSITNA RIVER
Chickaloon River
Chickaloon
Chickaloon River Bridge
Moose Creek
Matanuska River
Sutton
Glenn Highway
Willow
Moose Creek
Alaska Railroad
Houston
Wasilla
Palmer
Big Lake
Susitna
Knik
Knik River
14A
Knik Arm
Eklutna
Alexander
KNIK GLACIER
Eklutna Lake
Chugiak
Eagle River
Lake George
ANCHORAGE
Fire Island
FT. RICHARDSON ELMENDORF AFB MANAGEMENT AREA
ANCHORAGE MANAGEMENT AREA
Cook Inlet
14C
Point Possession
Alaska Railroad
Seward Highway
CHUGACH NATIONAL FOREST
Chickaloon Bay
Turnagain Arm
Girdwood
Twentymile River
Hope
Portage
KENAI NATIONAL WILDLIFE REFUGE
N
Unit 14
Southcentral Region
Anchorage
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads


Tyonek
Point Possession
Turnagain Arm
Chickaloon Bay
Girdwood
Hope
15A
COOK INLET
CHUGACH NATIONAL FOREST
Nikiski
SKILAK LOOP WILDLIFE MANAGEMENT AREA
Kenai
Sterling
Cooper Landing
Moose Pass
Kenai River
Soldotna
Skilak Lake
Russian River
Skilak River
Kalgin Island
15B
Kasilof
Kasilof River
Clam Gulch
Tustumena Lake
PENINSULA
Sterling Highway
Seward
Ninilchik
KENAI
KENAI NATIONAL WILDLIFE REFUGE
HARDING ICE FIELD
Resurrection Bay
Fox River
KENAI FJORDS NATIONAL PARK
Anchor Point
Anchor River
Aialik Bay
BLYING SOUND
Kachemak Bay
MOUNTAINS
Homer
15C
COOK INLET
KENAI
McCarty Fjord
Seldovia
Nuka Bay
Nanwalek
Port Graham
Nuka Island
Gore Point
CHUGACH ISLANDS
N
Unit 15
Southcentral Region
Kenai
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads


ARCTIC VILLAGE SHEEP MANAGEMENT AREA
ARCTIC NATIONAL WILDLIFE REFUGE
DALTON HIGHWAY CORRIDOR MANAGEMENT AREA
Arctic Village
25A
Chandalar
Wiseman
Coldfoot
Christian
YUKON FLATS NATIONAL WILDLIFE REFUGE
Venetie
Chalkyitsik
Fort Yukon
25B
25D
Beaver
Birch Creek
YUKON RIVER
Stevens Village
Fort Hamlin
Circle
Rampart
Livengood
WHITE MOUNTAINS NATIONAL RECREATION AREA
STEESE NATIONAL CONSERVATION AREA
25C
Central
Circle Hot Springs
Eureka
Minto
Steese Hwy
Fox
FAIRBANKS
Chena Hot Springs
YUKON - CHARLEY RIVERS NATIONAL PRESERVE
Eagle
CANADA
US
N
Unit 25
Eastern Interior Region
Fort Yukon
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads

WP12-01 Executive Summary	
General Description	Proposal WP12-01, submitted by the Brown Bear Claw Handicraft Working Group, requests that prior to selling a handicraft incorporating a brown bear claw(s), the hide or claw(s) not attached to a hide, must be sealed by an authorized Alaska Department of Fish and Game (ADF&G) representative and that a copy of the ADF&G sealing certificate would then accompany the handicraft when sold.
Proposed Regulation	**Definitions and Utilization of Wildlife** *§___.25(j)(7) If you are a Federally qualified subsistence user, you may sell handicraft articles made from the skin, hide, pelt, or fur, including claws, of a brown bear taken from Units 1–5, 9A–C, 9E, 12, 17, 20, 22, 23, 24B (only that portion within Gates of the Arctic National Park), 25, or 26.* *(i) In Units 1, 2, 3, 4, and 5, you may sell handicraft articles made from the skin, hide, pelt, fur, claws, bones, teeth, sinew, or skulls of a brown bear taken from Units 1, 4, or 5.* *(ii) ~~[Reserved]~~* ***Prior to selling a handicraft incorporating a brown bear claw(s), the hide or claw(s) not attached to a hide, must be sealed by an authorized ADF&G representative.*** *(A)* ***A copy of the ADF&G sealing certificate must accompany the handicraft when sold.***
OSM Preliminary Conclusion	**Support**
Southeast Regional Council Recommendation	
Southcentral Regional Council Recommendation	
Kodiak/Aleutians Regional Council Recommendation	
Bristol Bay Regional Council Recommendation	
Yukon/Kuskokwim Delta Regional Council Recommendation	
Western Interior Regional Council Recommendation	
Seward Peninsula Regional Council Recommendation	

continued on next page

WP12-01 Executive Summary *(continued)*	
Northwest Arctic Regional Council Recommendation	
Eastern Interior Regional Council Recommendation	
North Slope Regional Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**1 Support**

DRAFT STAFF ANALYSIS
WP12-01

ISSUES

Proposal WP12-01, submitted by the Brown Bear Claw Handicraft Working Group, requests that prior to selling a handicraft incorporating a brown bear claw(s), the hide or claw(s) not attached to a hide, must be sealed by an authorized Alaska Department of Fish and Game (ADF&G) representative and that a copy of the ADF&G sealing certificate would then accompany the handicraft when sold.

DISCUSSION

This proposal is a compromise reached by the members of the Brown Bear Claw Handicraft Working Group (Working Group). The proposal addresses concerns originally raised by the State of Alaska with Federal regulations that allow the sale of handicrafts that include brown bear claws from bears that are taken under Federal subsistence regulations. The Working Group suggested that deferred Proposals WP08-05 and WP10-02 be opposed (see deferred Proposal WP10-02), and that Proposal WP12-01 be submitted. The intent of the proposal is to protect subsistence users who incorporate brown bear claws into handicrafts for sale by providing proof that the claws are from brown bears that were harvested by Federally qualified subsistence users. Having proof that the claws are from subsistence-harvested brown bears could provide added value to a handicraft, as it would clearly identify that the claws are from a legally harvested brown bear. Requiring that a copy of the sealing certificate accompany the handicraft would provide a method of tracking legally harvested brown bears, but also would require modification to the sealing certificate, which is managed by the State of Alaska, to include a place on the certificate indicating that the bear was harvested by a Federally qualified subsistence user.

Existing Federal Regulation

Definitions and Utilization of Wildlife

§___.25(j)(7) If you are a Federally qualified subsistence user, you may sell handicraft articles made from the skin, hide, pelt, or fur, including claws, of a brown bear taken from Units 1–5, 9A–C, 9E, 12, 17, 20, 22, 23, 24B (only that portion within Gates of the Arctic National Park) , 25, or 26.

(i) In Units 1, 2, 3, 4, and 5, you may sell handicraft articles made from the skin, hide, pelt, fur, claws, bones, teeth, sinew, or skulls of a brown bear taken from Units 1, 4, or 5.

(ii) [Reserved].

Proposed Federal Regulation

Definitions and Utilization of Wildlife

§___.25(j)(7) If you are a Federally qualified subsistence user, you may sell handicraft articles made from the skin, hide, pelt, or fur, including claws, of a brown bear taken from Units 1–5, 9A–C, 9E, 12, 17, 20, 22, 23, 24B (only that portion within Gates of the Arctic National Park), 25, or 26.

(i) In Units 1, 2, 3, 4, and 5, you may sell handicraft articles made from the skin, hide, pelt, fur, claws, bones, teeth, sinew, or skulls of a brown bear taken from Units 1, 4, or 5.

(ii) ~~[Reserved]~~ ***Prior to selling a handicraft incorporating a brown bear claw(s), the hide or claw(s) not attached to a hide, must be sealed by an authorized ADF&G representative.***

(A) ***A copy of the ADF&G sealing certificate must accompany the handicraft when sold.***

Existing State Regulations

5AAC 92.200. Purchase and sale of game

In accordance with AS 16.05.920(a) and 16.05.930(e), the purchase, sale, or barter of game or any part of game is permitted except as provided in this section.

Except as provided in 5AAC 92.031, a person may not purchase, sell, barter, advertise or otherwise offer for sale or barter:

(1) any part of a bear, except an article of handicraft made from the fur of a bear;

In 2005, the State of Alaska, Board of Game began to allow the sale of raw bear hides, with claws attached, harvested in specific predator control management areas under a State permit.

5 AAC 92.031. Permit for selling skins, skulls, and trophies

(c) After the skin and skull is sealed as required under 5 AAC 92.165(a) , a person may sell the untanned skin, with claws attached, and skull of a black bear taken in an active predator control area listed in 5 AAC 92.125 only under a permit issued by the department.

(d) After the skin and skull is sealed as required under 5 AAC 92.165(a) , a person may sell the untanned skin, with claws attached, and skull of a brown bear taken in an active brown bear predator control area listed in 5 AAC 92.125 only under a permit issued by the department.

(e) In this section, "active" means that predator control permits have been issued for the referenced predator control area during the current year.

Extent of Federal Public Lands

Proposed regulations would apply to all Federal public lands in Units 1-5, 9A-C, 12, 17, 20, 23, 24B (only that portion within Gates of the Arctic National Park), 25, or 26, as defined by Federal subsistence hunting regulations.

Customary and Traditional Use Determinations

The customary and traditional use determinations for brown bear for all units in the State are included in the **Appendix** of WP10-02 (Deferred) analysis.

Regulatory History

The Board has consistently rejected attempts to remove brown bear claws as a legal item with which Federally qualified users can make handicrafts for sale. Retaining the use of claws in handicrafts for sale is consistent with previous Board action, and is not expected to significantly increase harvests, as described in previous analyses.

The Board has provided for the sale of handicrafts made from the skin, hide, pelt, fur, claws, bones, teeth, sinew, or skulls of brown bears by Federally qualified subsistence users where required. The intent of the Board has been to allow Federally qualified subsistence users to fully utilize the above-listed parts of bears legally harvested under Federal subsistence regulations. It has not been the intent of the Board to create a commercial incentive to harvest bears based on the sale of bear handicrafts.

The following is a brief summary of regulatory actions taken by the Board regarding the sale of handicrafts made from bear parts.

May 2002 — The Board adopted regulations allowing the sale of handicrafts made from the "fur" of black bear (statewide regulation).

May 2004 — The Board adopted regulations allowing the sale of handicrafts made from the "fur" of brown bear taken in Eastern Interior, Bristol Bay, and Southeast regions. The Board also clarified its intent to maintain the Federal definition of "fur," which includes claws.

May 2005 — The Board adopted regulations that:

- Modified the definition of the term *handicraft*.
- Modified the definition of the terms *skin, hide, pelt, and fur*.
- Modified regulatory language to clarify that bear claws can be used in handicrafts for sale. (The previous language allowing the sale of handicrafts made with bear claws specifically referred to bear fur, with the reference to claws contained in the definition of fur. With the old language it was not obvious to most readers that the use of claws was permitted. This action by the Board did not authorize any new uses.)
- Allowed the sale of handicrafts in Units 1–5 made from bones, teeth, sinew, or skulls of bears taken in those units.

May 2006 — The Board rejected proposed regulations to prohibit the sales of handicrafts made from bear claws to businesses. However, the Board did adopt regulatory language that prohibits handicraft sales that constitute a "significant commercial enterprise."

May 2007 — The Board rejected proposed regulations that claws be removed from the Federal definition of fur and that sales of handicraft articles made from claws, bones, teeth, sinew, or skulls of black and brown bears be allowed for sale only between Federally qualified subsistence users statewide.

May 2008 — The Board deferred a proposed regulation governing the use of brown bear claws in handicrafts for sale. The proposal asked for the removal of all unit-specific regulations related to the statewide sale of brown bear handicrafts made of skin, hide, pelt or fur. The proposal also stated that sales of brown bear handicrafts made of claws, bones, teeth, sinew, or skulls should occur only between Federally qualified subsistence users. The deferment pended on the formation of a working group to address the issue of developing a method of tracking brown bear claws made into handicrafts for sale. The working group would include representatives from all interested Subsistence Regional Advisory Councils (Councils) and State and Federal staff (FSB 2008:102-119).

May 2010 — The Board was presented with an update of the working group.

Brown Bear Claw Handicraft Working Group

The Brown Bear Claw Handicraft Working Group was composed of representatives from nine of the ten Councils, staff from ADF&G, and staff of Federal agencies. The working group met over several occasions between 2009 and 2011 to discuss a range of issues relating to brown bear claws including their uses in handicrafts, the feasibility of tracking, and potential changes to regulations. An initial scoping meeting between Federal and State staff was held in January 2009; at that meeting a draft charge was developed[1]. A briefing was provided to the Councils during the Winter 2009 meeting cycle on the status of the working group, and Councils selected representatives to participate in the working group. The first working group meeting occurred in June 2009. Federal and State staff conducted further research and met twice in the summer of 2009 to discuss research questions and issues. Staff provided another briefing to the Councils on the status of the working group at the Fall 2009 Council meetings.

The working group met again in July 2010 and discussed changing the Federal subsistence regulations over the sale of handicrafts incorporating brown bear claws. The group posed that if these regulations were to change, that the new regulations not be burdensome to subsistence users. The working group also discussed the Convention on International Trade in Endangered Species agreement and sealing requirements, which affect subsistence users who wish to sell handicrafts that incorporate brown bear claws.

The working group came to consensus in July 2010 to recommend that the Board reject deferred Proposal WP10-02 that had been submitted in 2008 (numbered in 2008 as WP08-05) and submit a new proposal. The working group suggested the new proposal require sealing a brown bear only if the subsistence user intends to sell a handicraft incorporating brown bear claw(s). The results of the July 2010 meeting, including the working group's suggested proposal language, were taken to nine of the ten Councils during the Fall 2010 meeting cycle to seek input from the Councils. The Councils also were notified that a new proposal would come before them in the fall of 2011 and before the Board in January of 2012. The working group had requested that the Councils' comments and suggestions be brought back to the working group for their consideration prior to finalizing a proposal. The working group held a teleconference March 2011 to hear the comments and suggestions from the Councils. At its March 2011 meeting, the working group developed a new proposal, WP12-01, requesting that prior to selling a handicraft incorporating a brown bear claw, the hide or claws not attached to a hide, must be sealed by an authorized ADF&G representative. To assure that the handicraft came from a brown bear hide that had been harvested by a Federally qualified subsistence user, a copy of the ADF&G sealing certificate would be required to accompany the handicraft when sold.

Biological Background

Brown bears range throughout most of Alaska, except the islands of the Aleutian Chain west of Unimak and the southeast Alaska islands south of Frederick Sound. Brown bear populations throughout most of Alaska are generally stable and occupy all of their historic range (Miller 1993). Throughout the State, brown bear population densities are diverse and vary according to food availability. On the North Slope where food is scarce, bear densities can be as low as one bear every 300 miles. Brown bear densities as high as one brown bear per mile have been recorded in coastal areas with healthy salmon runs. Brown

1 Draft charge for working group: Develop a method(s) to recommend to the Federal Subsistence Board and Board of Game for tracking brown bear claws made into handicrafts that is enforceable and culturally sensitive, commensurate with the need to provide conservation of this wildlife resource.

bear density is moderate in interior Alaska where the average is one bear per 15–23 miles (Eide et al. 2008).

The following quote from *Ursus* (2002) may provide a clearer picture of the status of brown and other bears:

> Despite our rapidly increasing knowledge of bears, there are few places in the world where we really know how bear populations are faring…Assessments of bear populations often are based on records of dead animals and trends in habitat availability. These data produce dubious indications of population trends. Case studies relating to the trade in bear parts, sport harvests, and nuisance kills indicate that records of human-killed bears may not be accurate and may not necessarily reflect changes in population size. Increasing bear populations may continue to rise with increased levels of human exploitation (as long as it is below the maximum sustainable take), whereas declining populations may continue to plummet despite reduced exploitation. Ironically, bear populations that have been managed for sustained harvests have generally fared better than populations in which hunting has been prohibited, mainly because the former better controls illicit hunting than the latter (Garshelis 2002: 321–334).

There is no evidence to indicate that Federal subsistence regulations have led to an increased legal or illegal harvest of brown bears or that current Federal subsistence regulations adversely affect brown bear populations.

Effects of the Proposal

Adopting the proposal would provide some protection to subsistence users who incorporate brown bear claws into handicrafts for sale by providing proof that the claws are from brown bears that were harvested by Federally qualified subsistence users. By requiring that a copy of the sealing certificate accompany the handicraft, it would clearly identify that the claws are from a legally harvested brown bear. It is possible that having proof that the claws are from a subsistence-harvested brown bear could provide added value to a handicraft, as it would identify that the claws are from a legally-harvested brown bear. Adopting the proposal would only add an additional requirement of sealing the brown bear hide for those who are selling a handicraft incorporating a brown bear claw. In those units where sealing is already required (see **Table 1**), this proposal would have no substantial effect on subsistence users. If adopted, the proposal would require additional paperwork requirements to some subsistence users, which could be a burden to those users.

The sealing certificate would require modification so that there would be a space for indicating that the bear was harvested by a Federally qualified subsistence user. Sealing certificates are managed by the State of Alaska.

There is no known evidence to indicate that current Federal subsistence regulations adversely affect brown bear populations, nor that Federal subsistence regulations have led to an increased legal or illegal harvest of brown bears.

OSM PRELIMINARY CONCLUSION

Support Proposal WP12-01.

Table 1. Handicraft, salvage, and sealing requirements for brown bears harvested under Federal Subsistence Management Regulations*

	Unit																			
Regulation	1	2	3	4	5	6–8	9	10–11	12	13–16	17	18	19	20	21	22	23	24	25	26
__.25(j)(7) Authorized to sell handicrafts made from skin, hide, pelt, or fur, including claws, of a brown bear taken from the below units:	X	X	X	X	X		A, B, C, E		X		X			X		X	X	B[1]	X	X
__.25(j)(7)(i) In Units 1-5, authorized to sell handicrafts made from skin, hide, pelt, fur, claws, bones, teeth, sinew, or skulls of a brown bear taken from the below units:	X			X	X															
__.25(j)(2)(ii) The hide of brown bears need not be salvaged in units:					X		B				X	X	A[2], B		D	X	X	X		A
__.26(j)(2) You may not possess or transport from Alaska the untanned skin or skull of a bear unless both have been sealed; sealing is not required for bears taken in the below units unless removed from the area.					X		B, E				X	X	A, B[3]		D	X	X	X		A
__.26(j)(3) You must keep a bear skin and skull together until both are sealed; this provision and sealing is not required for bears taken in the below units unless removed from the area. If sealed, ADF&G will remove a rudimentary premolar tooth.					X		B, E				X	X	A, B[3]		D	X	X	X		A
__.26(j)(3)(ii) If the skin or skull of a bear taken in the below units are removed from the area, you must have it sealed in Bethel, Dillingham, or McGrath; ADF&G will retain the skin of the skull and front claws.							B				X	X	A, B[3]							
__.26(j)(3)(iii) If the skin or skull of a bear taken in the below units are removed from the area or taken for commercial tanning within the area, you must first have it sealed in Barrow, Galena, Nome, or Kotzebue; ADF&G will retain the skin of the skull and front claws.															D	X	X	X		A
__.26(j)(3)(iv) If the skin or skull of a bear taken in the below units are removed from the area, you must first have it sealed in Yakutat.					X															
__.26(j)(3)(v) If the skin or skull of a bear taken in the below units are removed from the unit, you must first have it sealed; ADF&G will retain the skin of the skull and front claws.							E													

* See 50 CFR 100 for exact regulatory text.
[1] only in that portion within Gates of the Arctic National Park; [2] portions of; [3] downstream of and including the Aniak River drainage.

Justification

Previous action of the Board has been consistent with Section 803 of ANILCA, which includes the "making and selling of handicraft articles out of nonedible byproducts of fish and wildlife resources taken for personal or family consumption." This proposal would provide some protection to subsistence users who incorporate brown bear claws into handicrafts for sale by providing proof that the claws are from brown bears that were harvested by Federally qualified subsistence users. Requiring a copy of the sealing certificate to accompany the handicraft would clearly identify that the claws are from a legally-harvested brown bear. Value could be added to the handicraft, because the sealing certificate would identify that the claws are from a legally-harvested brown bear. Those subsistence users who harvest brown bears from units where sealing is already required would not be affected by this proposal. It is not anticipated that this proposal would adversely affect brown bear populations.

There is no known evidence to indicate that current Federal subsistence regulations adversely affect brown bear populations and there is no evidence to indicate that Federal subsistence regulations have led to an increased legal or illegal harvest of brown bears.

Requiring that a copy of the sealing certificate accompany the handicraft would provide a method of tracking legally-harvested brown bears, but also would require modification to the sealing certificate, which is managed by the State of Alaska, to include a place on the certificate indicating that the bear was harvested by a Federally qualified subsistence user.

LITERATURE CITED

Eide, S., S. Miller, H. Reynolds. Retrieved January 17, 2008. Alaska Wildlife Notebook Series. Internet: http://www.adfg.state.ak.us/pubs/notebook/

FWS. 1982. Brown bear (Ursus arctos). Pages 247–248 in FWS. Initial report baseline study of fish, wildlife and their habitats. Anchorage, AK.

Garshelis, D. 2002. Misconceptions, Ironies, and Uncertainties Regarding Trends in Bear Populations. Ursus 13:321–334.

Miller, S. D. 1993. Brown bears in Alaska: a statewide management overview. Wildlife Tech. Bull. #11. ADF&G, Division of Wildlife Conservation. 40 pages.

WRITTEN PUBLIC COMMENTS

Support. No justification was provided. *Gates of the Arctic Subsistence Resource Commission*

WP10-02 (Deferred) Executive Summary	
General Description	Proposal WP10-02 (deferred proposal WP08-05) requested clarification of the existing Federal Subsistence management regulation governing the use of brown bear claws in handicrafts for sale. The proposal asked for the removal of all unit-specific regulations related to the statewide sale of brown bear handicrafts made of skin, hide, pelt or fur and that sales of brown bear handicrafts made of claws, bones, teeth, sinew, or skulls should occur only between Federally qualified subsistence users. *Submitted by the Alaska Department of Fish and Game*
Proposed Regulation	*§___.25(j)(7) If you are a Federally qualified subsistence user, you may sell handicraft articles made from the skin, hide, pelt, or fur,* ***not*** *including claws, of a brown bear ~~taken from Units 1–5, 9A–C, 9E, 12, 17, 20, or 25~~.* *(i) ~~In Units 1, 2, 3, 4, and 5~~,* ***If you are a Federally qualified subsistence user,*** *you may sell handicraft articles made from the ~~skin, hide, pelt, fur~~, claws, bones, teeth, sinew, or skulls of a brown bear* ***to another Federally qualified subsistence user*** *~~taken from Units 1, 4, or 5~~.* *(ii) [Reserved].*
OSM Preliminary Conclusion	**Take no action**
Southeast Regional Council Recommendation	
Southcentral Regional Council Recommendation	
Kodiak/Aleutians Regional Council Recommendation	
Bristol Bay Regional Council Recommendation	
Yukon/Kuskokwim Delta Regional Council Recommendation	
Western Interior Regional Council Recommendation	
Seward Peninsula Regional Council Recommendation	
Northwest Arctic Regional Council Recommendation	
Eastern Interior Regional Council Recommendation	

continued on next page

WP10-02 (Deferred) Executive Summary *(continued)*	
North Slope Regional Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP10-02 *(DEFERRED WP08-05)*

Proposal WP10-02 (deferred proposal WP08-05), submitted by the Alaska Department of Fish and Game (ADF&G), requested clarification of the existing Federal Subsistence management regulation governing the use of brown bear claws in handicrafts for sale. The proposal asked for the removal of all unit-specific regulations related to the statewide sale of brown bear handicrafts made of skin, hide, pelt or fur and that sales of brown bear handicrafts made of claws, bones, teeth, sinew, or skulls should occur only between Federally qualified subsistence users.

Proposal WP10-02 was deferred by the Federal Subsistence Board (Board) at its May 2008 meeting at the suggestion of the ADF&G. The original deferment pended on the formation of a working group to address the issue of developing a method of tracking brown bear claws made into handicrafts for sale. In 2008, the Board voted unanimously to defer the proposal. The Board directed that the working group include representatives from all interested Subsistence Regional Advisory Councils (Councils) and State and Federal staff (FSB 2008:102-119). In 2010, the Board was presented with an update of the working group. The Board agreed to continue to defer WP10-02 until the working group could meet again and come to a consensus on a future plan or proposal.

The Brown Bear Claw Handicraft Working Group (Working Group) was composed of representatives from nine of the ten Councils, staff from ADF&G, and staff of Federal agencies. The Working Group met several times between 2009 and 2011 to discuss a range of issues relating to brown bear claws including their uses in handicrafts, the feasibility of tracking, and potential changes to regulations. An initial scoping meeting between Federal and State staff was held in January 2009; at that meeting a draft charge was developed[1]. A briefing was provided to the Councils (except Western) during the Winter 2009 meeting cycle on the status of the Working Group, and the Councils selected representatives to participate in the Working Group. The first Working Group meeting occurred in June 2009. Federal and State staff conducted further research and met twice in the summer of 2009 to discuss research questions and issues. Staff provided another briefing to the Councils (except Western) on the status of the Working Group at the Fall 2009 Council meetings.

The Working Group met again in July 2010 and discussed changing the Federal subsistence regulations concerning the sale of handicrafts incorporating brown bear claws. The group posed that if these regulations were to change, that the new regulations not be burdensome to subsistence users. The Working Group also discussed the Convention on International Trade in Endangered Species agreement and sealing requirements, which affect subsistence users who wish to sell handicrafts that incorporate brown bear claws.

The Working Group came to consensus in July 2010 to recommend that the Board reject deferred Proposal WP10-02 that had been submitted in 2008 (numbered in 2008 as WP08-05) and that a new proposal should be submitted. The Working Group suggested the new proposal (WP12-01) require sealing a brown bear only if the subsistence user intends to sell a handicraft incorporating brown bear claw(s). The results of the July 2010 meeting, including the Working Group's suggested proposal, were taken to nine of the ten Councils during the Fall 2010 meeting cycle to seek input from the Councils. The Councils also were notified that a new proposal would come before them in the fall of 2011 and before the Board

1 Draft charge for working group: Develop a method(s) to recommend to the Federal Subsistence Board and Board of Game for tracking brown bear claws made into handicrafts that is enforceable and culturally sensitive, commensurate with the need to provide conservation of this wildlife resource.

in January of 2012. The Working Group had requested that the Councils' comments and suggestions be brought back to the Working Group for their consideration prior to finalizing a proposal. The Working Group held a teleconference March 2011 to hear the comments and suggestions from the Councils. At its March 2011 meeting, the Working Group developed a new proposal, WP12-01, requesting that prior to selling a handicraft incorporating a brown bear claw, the hide or claws not attached to a hide, must be sealed by an authorized ADF&G representative. To assure that the handicraft came from a brown bear hide that had been harvested by a Federally qualified subsistence user, a copy of the ADF&G sealing certificate would be required to accompany the handicraft when sold.

No analysis was written regarding deferred Proposal WP08-05 (WP10-02). Nothing has changed since the analysis of Proposal WP08-05 was presented to the Board in May of 2008 (see **Appendix**).

Analysis of Proposal WP12-01 is presented separately.

OSM PRELIMINARY CONCLUSION

Take no action on Proposal WP10-02 (deferred proposal WP08-05).

Justification

Proposal WP08-05 (and subsequently WP10-02) was deferred by the Board pending the recommendations of the Brown Bear Claw Handicraft Working Group. The Working Group compromised on a proposed regulation that would address concerns originally raised by the State of Alaska with Federal regulations that allow the sale of handicrafts that include brown bear claws from bears that are taken under Federal Subsistence regulations. The recommendation of the Working Group is to oppose Proposals WP08-05/WP10-02 and for the Board to consider Proposal WP12-01 in place of Proposals WP08-05/WP10-02. Proposal WP12-01, submitted by the Working Group, would continue to allow selling a handicraft incorporating brown bear claws in specific units, while requiring sealing the brown bear hide only when the handicraft incorporating the claw(s) is sold. Analysis of Proposal WP12-01 is presented separately. The State of Alaska intends to request that the Board withdraw deferred proposals WP10-02 (WP08-05) at the January 2012 Board meeting (Yuhas 2011, pers. comm.).

LITERATURE CITED

FSB. 2008. Transcripts of the Federal Subsistence Board proceedings, April 29, 2008. Office of Subsistence Management, FWS. Anchorage, AK.

Yuhas. 2011. State-Federal Subsistence Liaison Team Leader. Alaska Department of Fish and Game, State of Alaska. Anchorage, AK.

WP10-02 APPENDIX

STAFF ANALYSIS
WP08-05

ISSUES

Proposal WP08-05, submitted by the Alaska Department of Fish and Game (ADF&G), requests the removal of all unit-specific regulations related to the statewide sale of brown bear handicrafts made of skin, hide, pelt or fur and that sales of brown bear handicrafts made of claws, bones, teeth, sinew, or skulls should occur only between Federally qualified subsistence users.

It should be noted that within the Proposed Federal Regulation, the regulatory language, as presented, would preclude all sales of brown bear claws unless amended. This language is found in §___.25(j)(7) and includes "not including claws" which would supersede the language in the next passage which, as written, is intended to allow the sale of handicrafts that include brown bear claws only between Federally qualified subsistence users.

DISCUSSION

The proponent submitted this proposal in order to refine Federal regulations, which, in its view, allow for "unconstrained commercial sale of handicrafts made from brown bear parts" and create "market incentives for poaching." Between 2002 and 2007, the Federal Subsistence Board (Board) considered seven proposals regarding the sale of handicrafts made from some of the nonedible parts of bears. Throughout this period, the Board has consistently provided for the sale of handicrafts made from the skin, hide, pelt, fur, claws, bones, teeth, sinew, and skulls of brown bear taken by Federally qualified subsistence users from units where these practices are considered appropriate.

The proponent's description of persons eligible to sell handicrafts made with these parts would increase the types of bear parts eligible for sale in much of the State, but would narrow sales only to those between Federally qualified rural residents.

Many of the proponent's requests are based on conservation concerns (ADF&G 2008). There are many well documented conservation concerns connected to the illegal trade of bear parts such as gall bladders, bile, and paws. These concerns exist because of the lucrative markets for what is referred to as the "traditional Chinese medicine" trade and Asian "wildlife cuisine" which includes the meat of bear paws (not including claws) (HSUS 2008, Garshelis and McLellan 2008, Garshelis 2002, Williamson and Phipps 1999). These types of illegal trade are a threat to bears in North America and around the world. On the other hand, there appears to be an absence of documentation regarding conservation concerns related to bear claws and bear claw handicrafts. This absence seems to indicate that the effects of the trade or sale of bear claws is not comparable to the trade and sale of bear gall bladders and paws.

Existing Federal Regulation

Definitions & Utilization of Wildlife

§___.25(j)(7) If you are a Federally qualified subsistence user, you may sell handicraft articles made from the skin, hide, pelt, or fur, including claws, of a brown bear taken from Units 1–5, 9A–C, 9E, 12, 17, 20, or 25.

(i) In Units 1, 2, 3, 4, and 5, you may sell handicraft articles made from the skin, hide, pelt, fur, claws, bones, teeth, sinew, or skulls of a brown bear taken from Units 1, 4, or 5.

(ii) [Reserved].

Proposed Federal Regulation

Definitions & Utilization of Wildlife

§___.25(j)(7) If you are a Federally qualified subsistence user, you may sell handicraft articles made from the skin, hide, pelt, or fur, ***not*** *including claws, of a brown bear ~~taken from Units 1–5, 9A–C, 9E, 12, 17, 20, or 25~~.*

(i) ~~In Units 1, 2, 3, 4, and 5~~, ***If you are a Federally qualified subsistence user,*** *you may sell handicraft articles made from the ~~skin, hide, pelt, fur~~, claws, bones, teeth, sinew, or skulls of a brown bear* ***to another Federally qualified subsistence user*** *~~taken from Units 1, 4, or 5~~.*

(ii) [Reserved].

Existing State Regulations

5AAC 92.200. Purchase and sale of game

In accordance with AS 16.05.920(a) and 16.05.930(e), the purchase, sale, or barter of game or any part of game is permitted except as provided in this section.

Except as provided in 5AAC 92.031, a person may not purchase, sell, barter, advertise or otherwise offer for sale or barter:

(1) any part of a bear, except an article of handicraft made from the fur of a bear;

In 2005, the State of Alaska, Board of Game began to allow the sale of raw bear hides, with claws attached, harvested in specific predator control management areas under a State permit.

5 AAC 92.031. Permit for selling skins, skulls, and trophies

(c) After the skin and skull is sealed as required under 5 AAC 92.165(a) , a person may sell the untanned skin, with claws attached, and skull of a black bear taken in an active predator control area listed in 5 AAC 92.125 only under a permit issued by the department.

(d) After the skin and skull is sealed as required under 5 AAC 92.165(a) , a person may sell the untanned skin, with claws attached, and skull of a brown bear taken in an active brown bear predator control area listed in 5 AAC 92.125 only under a permit issued by the department.

(e) In this section, "active" means that predator control permits have been issued for the referenced predator control area during the current year.

Extent of Federal Public Lands

Proposed regulations would apply to all Federal public lands in Alaska, as defined by Federal Subsistence hunting regulations. Federal public lands represent approximately 60% of Alaska or 380,000 square miles.

Customary and Traditional Use Determinations

The customary and traditional use determinations for brown bear for all units in the State are included in **Appendix A**.

Regulatory History

The following is a brief summary of regulatory actions taken by the Board regarding the sale of handicrafts made from bear parts.

May 2002 — The Board adopted regulations allowing the sale of handicrafts made from the "fur" of black bear (statewide regulation).

May 2004 — The Board adopted regulations allowing the sale of handicrafts made from the "fur" of brown bear taken in Eastern Interior, Bristol Bay, and Southeast regions. The Board also clarified its intent to maintain the Federal definition of "fur," which includes claws.

May 2005 — The Board adopted regulations that:

- Modified the definition of the term *handicraft*.
- Modified the definition of the terms *skin, hide, pelt, and fur*.
- Modified regulatory language to clarify that bear claws can be used in handicrafts for sale. (The previous language allowing the sale of handicrafts made with bear claws specifically referred to bear fur, with the reference to claws contained in the definition of fur. With the old language it was not obvious to most readers that the use of claws was permitted. This action by the Board did not authorize any new uses.)
- Allowed the sale of handicrafts in Units 1–5 made from bones, teeth, sinew, or skulls of bears taken in those units.

May 2006 — The Board rejected proposed regulations to prohibit the sales of handicrafts made from bear claws to businesses. However, the Board did adopt regulatory language that prohibits handicraft sales that constitute a "significant commercial enterprise."

May 2007 — The Board rejected proposed regulations that claws be removed from the Federal definition of fur and that sales of handicraft articles made from claws, bones, teeth, sinew, or skulls of black and brown bears be allowed for sale only between Federally qualified subsistence users statewide.

Biological Background

Brown bears range throughout most of Alaska, except the islands of the Aleutian Chain west of Unimak and the southeast Alaska islands south of Frederick Sound. Brown bear populations throughout most of Alaska are generally stable and occupy all of their historic range (Miller 1993). Throughout the State, brown bear population densities are diverse and vary according to food availability. On the North Slope

where food is scarce, bear densities can be as low as one bear every 300 miles. Brown bear densities as high as one brown bear per mile have been recorded in coastal areas with healthy salmon runs. Brown bear density is moderate in interior Alaska where the average is one bear per 15–23 miles (Eide and Miller 1994 and 2003).

The following quote from *Ursus* (2002) may provide a clearer picture of the biological status of brown and other bears:

> Despite our rapidly increasing knowledge of bears, there are few places in the world where we really know how bear populations are faring…Assessments of bear populations often are based on records of dead animals and trends in habitat availability. These data produce dubious indications of population trends. Case studies relating to the trade in bear parts, sport harvests, and nuisance kills indicate that records of human-killed bears may not be accurate and may not necessarily reflect changes in population size. Increasing bear populations may continue to rise with increased levels of human exploitation (as long as it is below the maximum sustainable take), whereas declining populations may continue to plummet despite reduced exploitation. Ironically, bear populations that have been managed for sustained harvests have generally fared better than populations in which hunting has been prohibited, mainly because the former better controls illicit hunting than the latter (Garshelis 2002: 321–334).

Effects of the Proposal

Under current Federal subsistence regulations, brown bear fur with claws can only be used to make handicrafts for sale if the bears were harvested from units in Eastern Interior, Bristol Bay and Southeast Alaska. Other parts, such as bones teeth, sinew, or skulls can only be used in handicrafts for sale from brown bear taken in Southeast Alaska. The proponent's description of persons eligible to sell handicrafts made with these parts would increase the types of bear parts eligible for sale in much of the State, but would narrow all sales only to those between Federally qualified rural residents. The removal of unit-specific restrictions would negate the intent of the Board and the Regional Advisory Councils in recognizing the diverse customary and traditional uses of bears and bear parts throughout the State. These diverse customary and traditional uses are reflected in Regional Advisory Council recommendations. Three proposals (WP08-12, WP08-52 and WP08-53) which request the inclusion of Units 11, 23, 24B and 26 for eligibility to sell brown bear handicrafts with claws have been submitted for the 2008–2010 wildlife regulatory cycle and are analyzed separately.

Previous Board action provided for the sale of handicrafts made from bear claws by Federally qualified subsistence users to consumers including and other than Federally qualified subsistence users. Restricting sales solely to other Federally qualified rural residents, as proposed, will satisfy the need to use these products for regalia and cultural events in rural areas; however, the proposed regulatory language will not allow for handicraft sales to a variety of consumers, which is desired by subsistence users to support themselves and their families in a contemporary cash-subsistence economy.

The Board has also consistently rejected attempts to remove brown bear claws as a legal item with which Federally qualified users can make handicrafts for sale. Retaining the use of claws in handicrafts for sale is consistent with previous Board action, and is not expected to significantly increase harvests, as described in previous analyses.

The Board has provided for the sale of handicrafts made from the skin, hide, pelt, fur, claws, bones, teeth, sinew, or skulls of brown bears by Federally qualified subsistence users where appropriate. The intent of

the Board has been to allow Federally qualified subsistence users to fully utilize the above-listed parts of bears legally harvested under Federal subsistence regulations. It has not been the intent of the Board to create a commercial incentive to harvest bears based on the sale of bear handicrafts.

There is no known evidence to indicate that current Federal subsistence regulations adversely affect brown bear populations, nor that Federal subsistence regulations have led to an increased legal or illegal harvest of brown bears.

OSM CONCLUSION

Oppose proposal WP08-05.

Justification

Previous action of the Board has been consistent with Section 803 of ANILCA, which includes the "making and selling of handicraft articles out of nonedible byproducts of fish and wildlife resources taken for personal or family consumption." This proposal would unnecessarily restrict the subsistence uses of Federally qualified subsistence users as specified in ANILCA Section 803. There is no evidence to indicate that current Federal regulations adversely affect bear populations, nor has any been provided. Further, there has been no evidence provided to indicate that current Federal regulations have led to an increased legal or illegal harvest of bears. If adopted, this proposal would broaden the use of some of the nonedible parts of brown bear into regions where use is not allowed under current Federal regulations. The residents of a number of these regions have stated, through their Regional Subsistence Advisory Councils, they are opposed to inclusion in these regulations.

LITERATURE CITED

Alaska Department of Fish and Game (ADF&G). 2008. ADF&G, Preliminary Comments to the Interagency Staff Committee, WP08-05. January 14, 2008.

Eide, S., S. Miller, H. Reynolds. Retrieved January 17, 2008. Alaska Wildlife Notebook Series. Internet: http://www.adfg.state.ak.us/pubs/notebook/

FWS. 1982. Brown bear (Ursus arctos). Pages 247–248 in FWS. Initial report baseline study of fish, wildlife and their habitats. Anchorage, AK.

Garshelis, D. 2002. Misconceptions, Ironies, and Uncertainties Regarding Trends in Bear Populations. Ursus 13:321–334.

Garshelis, D. and B. McLellan. January 17, 2008. The World Conservation Union and the Species Survival Commission 2004 Quadrennium, IUCN/SSC Bear Specialist Group. Internet: www.carnivorconservation.org/files/iucn_bear_report.pdf

HSUS, Humane Society of the United States. January 17, 2008. The Bear Trade—Questions and Answers. Internet:

www.hsus.org/wildlife issues_facing_wildlife/wildlife_trade/the_unbearable_trade_in_bear_parts_and_bile

HSUS, Humane Society of the United States. January 17, 2008. The Unbearable Trade in Bear Parts and Bile. Internet: www.hsus.org/wildlife issues_facing_wildlife/wildlife_trade/the_unbearable_trade_in_bear_parts_and_bile

Miller, S. D. 1993. Brown bears in Alaska: a statewide management overview. Wildlife Tech. Bull. #11. ADF&G, Division of Wildlife Conservation. 40 pages.

Reynolds, H.V. 1980. North Slope grizzly bear studies. ADF&G, Fed. Aid Wildl. Research Prog. Rep. Proj. W-17–11, Jobs 4.14R –4.15R.

Williamson, D. and M. Phipps, Eds. 2001. Proceedings of the Third International Symposium on the trade in bear parts (1999). TRAFFIC, East Asia.

WP08-05
APPENDIX A

The customary and traditional use determinations for brown bear for all units in the State are included below.

Unit	C & T determination for Brown Bear	Harvest Limits for Brown Bear
1	*Unit 1A—Rural residents of Unit 1A, except no Federal subsistence priority for residents of Hyder* *Unit 1B—Rural residents of Unit 1A, Petersburg and Wrangell, except no Federal subsistence priority for residents of Hyder* *Unit 1C—Rural residents of Unit 1C, Haines, Hoonah, Kake, Klukwan, Skagway, and Wrangell, except no Federal subsistence priority for residents of Gustavus* *Unit 1D—Rural residents of Unit 1D*	1 bear every four regulatory years by State registration permit only
2		
3		
4	*Rural residents of Unit 4 and Kake*	Unit 4, Chichagof Island south and west of a line that follows the crest of the island from Rock Point to Rodgers Point, including Yakobi and other adjacent islands; Baranof Island south and west of a line which follows the crest of the island from Nisnemi Point to the entrance of Gut Bay and including Kruzof and other adjacent islands—One bear every four regulatory years by State permit only
5	*Rural residents of Yakutat*	1 bear by Federal registration permit only
6	*No Federal subsistence priority*	No Federal open season
7	*No Federal subsistence priority*	No Federal open season

Unit	C & T determination for Brown Bear	Harvest Limits for Brown Bear
8	*Rural residents of Old Harbor, Akhiok, Larsen Bay, Karluk, Ouzinkie, and Port Lions*	1 bear by Federal registration permit only. Up to 1 permit may be issued in Akhiok; up to 1 permit may be issued in Karluk; up to 3 permits may be issued in Larsen Bay; up to 2 permits may be issued in Old Harbor; up to 2 permits may be issued in Ouzinkie; and up to 2 permits may be issued in Port Lions.
9	*Unit 9A—Residents of Pedro Bay* *Unit 9B—Rural residents of Unit 9B* *Unit 9C—Rural residents of Unit 9C* *Unit 9D—Rural residents of Units 9D and 10 (Unimak Island)* *Unit 9E—Residents of Chignik, Chignik Lagoon, Chignik Lake, Egegik, Ivanof Bay, Perryville, Pilot Point, Ugashik, and Port Heiden/Meshik*	Units 9A, 9C, and 9D: *see Special Provisions* for the communities of False Pass, King Cove, Cold Bay, Sand Point, and Nelson Lagoon. Unit 9B, Lake Clark National Park and Preserve—Residents of Nondalton, Illiamna, Newhalen, Pedro Bay, and Port Alsworth only—1 bear by Federal registration permit only. The season will be closed when 4 females or 4 bears have been taken, whichever occurs first. Unit 9B remainder—1 bear by State registration permit only Unit 9E—1 bear by Federal registration permit only
10	*Unit 10—Rural residents of Units 9D and 10 (Unimak Island)*	No Federal open season. *See Special Provisions for the communities of False Pass, King Cove, Cold Bay, Sand Point, and Nelson Lagoon for Unit 10.*
11	*Unit 11, north of the Sanford River—Residents of Chistochina, Chitina, Copper Center, Gakona, Glennallen, Gulkana, Kenny Lake, Mentasta Lake, Slana, Tazlina, Tonsina, and Units 11 and 12* *Unit 11 remainder—Residents of Chistochina, Chitina, Copper Center, Gakona, Glennallen, Gulkana, Kenny Lake, Mentasta Lake, Slana, Tazlina, Tonsina, and Unit 11*	1 bear
12	*Rural residents of Unit 12, Dot Lake, Chistochina, Gakona, Mentasta Lake, and Slana*	1 bear
13	*Rural residents of Unit 13 and Slana*	1 bear—Bears taken within Denali National Park must be sealed within 5 days of harvest. That portion within Denali National Park will be closed by announcement of the superintendent after 4 bears have been harvested

Unit	C & T determination for Brown Bear	Harvest Limits for Brown Bear
14	*Unit 14A—All rural residents* *Units 14B and 14C—No Federal subsistence priority*	No Federal open season
15	*No Federal Subsistence priority*	
16	*No Federal subsistence priority*	
17	*Unit 17A—Rural residents of Unit 17, and rural residents of Akiak, Akiachak, Goodnews Bay and Platinum* *Units 17A and 17B, those portions north and west of a line beginning from the Unit 18 boundary at the northwest end of Nenevok Lake, to the southern point of Upper Togiak Lake, and northeast to the northern point of Nukakuk Lake, northeast to the point where the Unit 17 boundary intersects the Shotgun Hills—Rural residents of Kwethluk* *Unit 17B, that portion draining into Nuyakuk Lake and Tikchik Lake—Rural residents of Akiak and Akiachak* *Units 17B and 17C—Rural residents of Unit 17*	1 bear by State registration permit only *Contact ADF&G for permit details*
18	*Residents of Akiachak, Akiak, Eek, Goodnews Bay, Kwethluk, Mountain Village, Napaskiak, Platinum, Quinhagak, St. Marys and Tuluksak*	1 bear by State registration permit only
19	*Units 19A and 19B—Rural residents of Units 19 and 18 within the Kuskokwim River drainage upstream from and including) the Johnson River* *Unit 19C—No Federal subsistence priority* *Unit 19D—Rural residents of Units 19A and 19D, Tuluksak, and Lower Kalskag*	Units 19A and 19B, those portions which are downstream of and including the Aniak River drainage—1 bear by State Registration permit only Unit 19A remainder; Unit 19B remainder; and Unit 19D—1 bear Unit 19C—No Federal open season
20	*Unit 20E—Rural residents of Unit 12 and Dot Lake* *Unit 20F—Rural residents of Unit 20F, Stevens Village and Manley* *Unit 20 remainder—All rural residents*	Unit 20A—1 bear Unit 20E—1 bear Unit 20 remainder—1 bear
21	*Rural residents of Units 21 and 23*	Unit 21D—1 bear by State registration permit only Unit 21 remainder—1 bear
22	*Unit 22—Rural residents of Unit 22*	Units 22A, 22B, 22D, and 22E—1 bear by State registration permit only Unit 22C—1 bear by State registration permit only

Unit	C & T determination for Brown Bear	Harvest Limits for Brown Bear
23	*Rural residents of Units 21 and 23*	Unit 23, except the Baldwin Peninsula north of the Arctic Circle—1 bear by State registration permit only Unit 23 remainder—1 bear every four years
24	*Unit 24, that portion south of caribou mountain and on public lands within and adjacent to the Dalton Highway Corridor Management Area—Rural Residents of Unit 24 and Stevens Village* *Unit 24 remainder—Rural residents of Unit 24*	1 bear by State registration permit
25	*Unit 25D—Rural residents of Unit 25D* *Unit 25 remainder—Residents of Unit 25 and Eagle*	Units 25A and 25B—1 bear Unit 25C—1 bear Unit 25D—1 bear
26	*Rural residents of Unit 26, except the Prudhoe Bay-Deadhorse Industrial Complex), Anaktuvuk Pass, and Point Hope*	Unit 26A—1 bear by State registration permit only Unit 26B—1 bear Unit 26C—1 bear

WP12-02 Executive Summary	
General Description	Proposal WP12-02 requests that only people 60 years of age or older, or disabled, be allowed to designate their harvest limit to another person. *Submitted by Michael Cronk of Tok*
Proposed Regulation	**§___.25 Subsistence taking of fish, wildlife, and shellfish: general regulations.** *(e) Hunting by designated harvest permit.* *If you are a Federally qualified subsistence user (recipient)* ***who is 60 years of age or older, or disabled****, you may designate another Federally qualified subsistence user to take deer, moose and caribou on your behalf unless you are a member of a community operating under a community harvest system or unless unit-specific regulations in §___.26 preclude or modify the use of the designated hunter system or allow the harvest of additional species by a designated hunter. The designated hunter must obtain a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for any number of recipients but may have no more than two harvest limits in his/her possession at any one time, unless otherwise specified in unit-specific regulations in §___.26.*
OSM Preliminary Conclusion	**Oppose**
Southeast Regional Council Recommendation	
Southcentral Regional Council Recommendation	
Kodiak/Aleutians Regional Council Recommendation	
Bristol Bay Regional Council Recommendation	
Yukon/Kuskokwim Delta Regional Council Recommendation	
Western Interior Regional Council Recommendation	
Seward Peninsula Regional Council Recommendation	
Northwest Arctic Regional Council Recommendation	
Eastern Interior Regional Council Recommendation	

continued on next page

WP10-01 Executive Summary *(continued)*	
North Slope Regional Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**1 support with modification** to include windows.

DRAFT STAFF ANALYSIS
WP12-02

ISSUES

Proposal WP12-02, submitted by Michael Cronk of Tok, Alaska, requests that only people 60 years of age or older, or disabled, be allowed to designate their harvest limit to another person.

DISCUSSION

The proponent claims that statewide regulations allow a person to harvest an unlimited number of animals per hunting season as long as he or she first obtains a designated hunter permit. The proponent explains that he supported the adoption of a designated hunter regulation to allow hunters to harvest animals for elders and others unable to hunt for themselves. The proponent further describes the problems that now exist with the designated hunter system: increasing numbers of people that formerly did not hunt are now getting designated hunter permits and hunting; hunters gathering designated hunter permits in order to continue hunting after harvesting their individual harvest limit; and hunters receiving designated hunter permits for their children but not hunting with their children and thereby not passing on knowledge of how to hunt. The proponent declares that these uses were not the intent of the Federal Subsistence Board when adopting the regulation, the abuses will continue, and wildlife populations could suffer unless limits are added to the designated hunter system.

Existing Federal Regulation

§___.25 Subsistence taking of fish, wildlife, and shellfish: general regulations.

(e) Hunting by designated harvest permit.

If you are a Federally qualified subsistence user (recipient), you may designate another Federally qualified subsistence user to take deer, moose and caribou on your behalf unless you are a member of a community operating under a community harvest system or unless unit-specific regulations in §___.26 preclude or modify the use of the designated hunter system or allow the harvest of additional species by a designated hunter. The designated hunter must obtain a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for any number of recipients but may have no more than two harvest limits in his/her possession at any one time, unless otherwise specified in unit specific regulations in §___.26.

Proposed Federal Regulation

§___.25 Subsistence taking of fish, wildlife, and shellfish: general regulations.

(e) Hunting by designated harvest permit.

If you are a Federally qualified subsistence user (recipient) ***who is 60 years of age or older, or disabled****, you may designate another Federally qualified subsistence user to take deer, moose and caribou on your behalf unless you are a member of a community operating under a community harvest system or unless unit-specific regulations in §___.26 preclude or modify the use of the designated hunter system or allow the harvest of additional species by a designated hunter. The designated hunter must obtain a designated hunter permit and must return a completed harvest*

report. The designated hunter may hunt for any number of recipients but may have no more than two harvest limits in his/her possession at any one time, unless otherwise specified in unit-specific regulations in §___.26.

Relevant Federal Regulation

Unit-specific regulations that preclude or modify the designated hunter system exist for five management units. They are Units 6, 9, 22, 23, and 26 (see **Appendix A**).

Existing State Regulation

The State of Alaska provides for the transfer of harvest limits from one person to another through its proxy hunting program (5 AAC 92.011; see Appendix B). **Table 1** is a side-by-side comparison of the State's proxy system to the Federal designated hunter system.

Table 1. State Proxy System compared to Federal Designated Hunter System.

State of Alaska Proxy System	Federal Subsistence Management Program Designated Hunter System
Applies where there is an open State harvest season.	Applies to Federal public lands when there is an open Federal harvest season.
Applies to caribou, deer, and moose.	Applies to caribou, deer, and moose.
Available to a hunter who is blind, physically disabled, or 65 years of age or older.	Available to Federally qualified subsistence users.
Either the recipient or the hunter may apply for the authorization.	Recipient may designate another Federally qualified subsistence user on his/her behalf.
No person may be a proxy for more than one recipient at a time.	A person may hunt for any number of recipients, but may have no more than two harvest limits in his/her possession at any one time.
Antler destruction is required for all species.	No antler destruction.

Extent of Federal Public Land

This proposal would apply to the entire state. Federal public lands comprise approximately 65% of Alaska and consist of 23% Bureau of Land Management, 15% National Park Service, 21% Fish and Wildlife Service, and 6% Forest Service lands.

Regulatory History

Prior to 2003, the Board adopted designated hunter regulations for 21 unit-specific hunts, and there were differences in how the regulations addressed the designated hunter system (see FSB 2003). In 2003, the Board established the statewide designated hunter system for deer, caribou, and moose, leaving the option for unit-specific regulations to include other species and special provisions (68 FR 38466. June 27, 2003). The Board was supported by the majority of Regional Advisory Councils and the Interagency Staff Committee (FSB 2003).

As mentioned earlier, instances exist in unit-specific regulations that preclude or modify the use of the designated hunter system or allow the harvest of additional species by a designated hunter. For example, in Unit 6 special provisions exist for moose, deer, black bear, beaver, and goat; in Unit 9 for caribou; in Unit 10 for caribou; in Unit 22 for muskoxen; in Unit 23 for sheep and muskoxen; and in Unit 26 for sheep and muskoxen (**Appendix A)**.

Customary and Traditional Uses

Designated hunter provisions provide recognition of the customary and traditional practices of sharing and redistribution of harvests. A plethora of research supports a need for a designated hunter system in Federal subsistence regulations to harmonize fundamental harvesting characteristics of rural Alaska communities with the Federal Subsistence Management Program. Sahlins (1972) observed that 20% to 30% of households in "family-based production" could be expected to fail to produce enough food to feed themselves. Family-based production is the foundation of the mixed subsistence-cash economy found in most rural Alaskan communities (cf. Wolfe 1981, 1987; Wolfe and Walker 1987; Wolfe et al. 1984). Family-based production is when households linked by kinship distribute the responsibility to harvest, process, and store wild resources based on factors such as skills and abilities, availability of able workers, sufficient income to purchase harvesting and processing technology, and other factors. Sahlins' (1972) observation has been repeated in subsistence studies conducted in rural Alaska communities (cf. Andrews 1988; Magdanz, Utermohle, and Wolfe 2002; Sumida 1989; Sumida and Andersen 1990). While predominantly-Native communities differ somewhat concerning family-based food production patterns, Wolfe et al. (2007) showed that some of the characteristics apply to culturally-mixed rural communities in Southeast Alaska as well. The common variables that affected household food production in rural Alaska in the late 20th century were: commercial fishing involvement, males over 15 years, age of elders, and single person households. Commercial fishing involvement and three or more males over 15 years correlated with households with relatively high wild food production. Older elders and single person households correlated with households with relatively low wild food production. Wolfe et al. (2007) observed that on a statewide basis it was not uncommon for about 30% of the households in a community to produce about 70% or more of the community's wild food harvest. Households in the higher harvesting third of households were called "super-households" based on Wolfe's (1987) research in rural Alaska communities.

The analysis of Proposal WP95-04, concerning a transferable moose harvest limit in Unit 5, described the rationale for the adoption of the proposal. The passage is repeated here because it continues to be relevant, describes the "super-household" phenomenon described above, and provides the primary rationale for the structure of the statewide designated hunter system in regulation today.

> [The designated hunter system] legalizes a traditional practice that is already going on. Within the individual harvest limits, some hunters cannot fulfill both the requirements of their own household and those of the people with whom they share. The proposal would permit hunters to harvest moose expressly for sharing.
>
> In every society, the ratio of producers to dependents is strongly influenced by the ecological setting and dominant mode of production. In societies with hunting and gathering economies (termed "subsistence" in Alaska), the proportion of producers ranges from approximately 50 to 70 percent. However, not all producers are hunters; some are engaged in processing foods. Consequently, it is common for a single hunter, in the northern context, to harvest resources for four or more individuals.

> Domestic units may pass through several developmental stages with widely varying ratios of producers to dependents. For example, a household in its early stages of development, with infants and small children, is different from a domestic unit headed by a middle-aged couple with several unmarried adult children. During later stages a household may be composed exclusively of elderly post-productive people. In any stage of development, households may contain members who are unable to or do not choose to harvest for themselves. Single-parent families are another category of households, which may rely on others to supply them with resources.
>
> Like households, individual producers also pass through developmental stages with distinctive productive capacities. A considerable amount of an apprentice harvester or processor's effort is consumed in learning. Conversely, individuals in their final productive years are primarily engaged with education and supervisory tasks rather than the direct procurement and processing of resources. Hence, the majority of production is accomplished by that segment of a population that, while having mastered requisite skills, is free of the responsibilities and physical impairments acquired with advancing adulthood. Finally, regardless of stage of development, all producers do not possess equal skills, abilities, and aptitudes. Each community has a minority of good hunters, trappers, and fishers.
>
> Inequalities in individual and household productive capacities are equalized via processes of distribution (sharing and feasting) and exchange (trade and barter). The nature, magnitude, and geographic extent of distributive processes are highly variable across households, communities, societies, and time periods (FSB 1995:31–32).

It is due to the variable nature of the distribution process, mentioned in the final paragraph of the passage above, that the Federal Subsistence Board, based on the recommendations of the majority of Regional Advisory Councils and the Interagency Staff Committee (FSB 2003), adopted the statewide designated hunter provisions that are in current Federal regulations (§___.25(e)). The Board considered, but did not adopt, a statewide provision that would restrict designators to only elderly or disabled subsistence users. However, based on a review of past analyses from 1993 to 2003, it is clear that the Board anticipated receiving requests to adopt unit-specific regulations that would preclude or modify the designated hunter system.

Harvest History

The designated hunter permit database is maintained at the Office of Subsistence Management (FWS 2011). Table 2 describes the use of the designated hunter system since 2003 when the statewide system was instituted by the Federal Subsistence Board. The data show the cumulative use for the 2003–2009 regulatory years. Designated hunters hunted for caribou, deer, moose, and sheep only. Based on Table 2, it is clear that a large majority of the harvest by designated hunter was deer, and the majority of permits were used in Southeast Alaska (Units 1–5). The portion of the total harvest taken by designated hunters for any one species was highest in Unit 3 for deer (8.9% of the harvest was taken by designated hunters), Unit 12 for caribou (7.0%), and Unit 5 for deer (5.7%); however, designated hunters generally harvested less than 2% of the total harvest for any one species in any single unit (**Table 2**).

People requesting to designate another hunter are not asked to indicate a disability, and therefore, data concerning the number of people with disabilities that designate a hunter could not be presented in the analysis.

Table 2. Use of designated hunter system based on completed harvest reports, 2003-2009 cumulative (ADF&G 2011, FWS 2011).

	Designated Hunters Only		All Hunters[a]	
Management Unit	Number of Permits Used (Hunted)	Number of Animals Harvested	Number of Animals Harvested	Percentage Harvested by Designated Hunters
Caribou				
9	6	4	2,376	0.2%
12	23	14	199	7.0%
13	100	43	11,600	0.4%
17	11	10	4,819	0.2%
18	2	1	2,894	0.0%
20	14	6	5,007	0.1%
Total (2003-2009)	156	78	26,895	0.3%
Moose				
1	1	1	1,122	0.1%
3	1	1	315	0.3%
5	4	4	314	1.3%
6	33	18	848	2.1%
11	4	4	356	1.1%
13	12	12	4,757	0.3%
15	1	1	3,193	0.0%
19	7	7	1,938	0.4%
24	8	1	1,164	0.1%
25	2	2	1,215	0.2%
26	1	1	96	1.0%
Total (2003-2009)	74	52	15,318	0.3%
Deer				
1	11	18	4,166	0.4%
2	92	105	13,697	0.8%
3	211	314	3,537	8.9%
4	224	407	30,366	1.3%
5	2	7	122	5.7%
6	1	3	14,653	<0.1%
8	134	225	31,894	0.7%
Total (2003-2007)[b]	675	1,079	98,435	1.1%
Sheep				
23	3	2	123	1.6%
Total (2003-2009)	3	2	123	1.6%

[a] All hunters including Federally qualified, non-Federally qualified, and nonresidents of the state.

[b] Harvest by all hunters available to 2007 only.

Some age data is available for the 2009 and 2010 regulatory years. For the 2009 and 2010 regulatory years combined, of the 1,108 people who designated another hunter, age data is available for only 80 people. Of the 80 people, 3 (4%) were 18-years of age or younger, 59 (74%) were age 19 to 59, and 18 (23%) were 60 or older (**Table 3**).

Table 3. The age of designators, based on the age of 80 out of a total of 1,108 people who designated another hunter during the 2009 and 2010 regulatory years (FWS 2011).

	Permits issued		Permits used		Animals taken	
Age of designators	Number	Percentage	Number	Percentage	Number	Percentage
18 years and younger	3	4%	3	4%	1	3%
19-59 years	59	74%	50	75%	28	70%
60 years and older	18	23%	14	21%	11	28%
Total	80	100%	67	100%	40	100%

Note: percentages may not equal 100 due to rounding.

The designated hunter database at the Office of Subsistence Management compiles limited data on the age of designated hunters because age is not a requirement for designating another hunter (except in Unit 6, see Appendix A). Applications for Federal registration permits request each hunter's age. When a person designates his or her harvest limit to another, the age of the designator is available on the Federal registration permit application; however, some hunts do not require a Federal registration permit. For hunts that do not require a Federal permit, the age of a designator is available on the State hunting license and not readily retrievable. Additionally, Federal registration permit applications ask each hunter to check a box if he or she is designating another hunter; however, this box is usually not checked by those using a designated hunter. Currently, age data is available for people who obtained a Federal registration permit and checked the box indicating they were using a designated hunter for the 2009 and 2010 regulatory years (FWS 2011).

Other Relevant Proposals

Action on this proposal may affect decisions on other wildlife proposals currently under consideration, WP12-10, WP12-11, and WP12-13. All three concern designated hunter provisions in Federal regulations, but none propose restrictions on the designator as does the proposal under consideration in this analysis, WP12-02.

Effects of the Proposal

If this proposal is adopted, only Federally qualified subsistence users who are 60 years of age or older, or disabled, would be allowed to designate another person to take their harvest limit of deer, caribou, and moose—except in Unit 6 where unit-specific regulations allow only those who are either blind, 65 years of age or older, at least 70% disabled, or temporarily disabled to designate a hunter (see **Appendix A**). The extent of impacts on the subsistence users cannot be measured exactly because statistics were only partially gathered to describe the age of those designating a hunter and not whether the user was disabled, noted above. From the information in Table 3, about 77% of the users designating a hunter were under 60 years old and would be prohibited from designating a hunter if this proposal is adopted.

The effect on wildlife populations would depend on the region. In regions where designated hunter use is more common, hunting effort may be eased, but no information has been systematically collected concerning this issue. No effects on other users are anticipated.

If this proposal is not adopted, Federally qualified subsistence users would continue to be allowed to designate another hunter to take their harvest limit of deer, caribou, and moose (except in Unit 6 where additional restrictions are in place, see above). No effects on wildlife populations are anticipated, and no effects on other users are anticipated.

OSM PRELIMINARY CONCLUSION

Oppose Proposal WP12-02.

Justification

Federal subsistence wildlife regulations allow any Federally qualified subsistence user to designate another subsistence user to take his or her harvest limit of deer, caribou, and moose. The designated hunter system supports a valid practice of communal sharing of resources and skills in rural Alaska. While in some regions the designated hunter system is lightly used, nonetheless it provides important regulatory flexibility to accommodate customary and traditional practices.

The proponent raises issues regarding the designated hunter system for the entire state. It is clear that in some regions people are not aware of the permit and their use of the system has not developed but is anticipated to develop as more participate in the formal harvest reporting systems available to them. Additionally, the harvest by designated hunters generally has been a small portion (less than 2%) of the total harvest by all hunters (including Federally qualified users, non-Federally qualified users, and nonresidents of the state, combined). Therefore, a statewide provision restricting the use of the designated hunter system is not supported. In circumstances where evidence is available to clearly warrant, region or unit-specific restrictions could be proposed.

Literature Cited

ADF&G. 2011. Sitka black-tailed deer hunting in Alaska: Harvest statistics. http://www.adfg.alaska.gov/index.cfm?adfg=deerhunting.deerharvest, accessed July 18. Juneau, AK.

Andrews, E.F. 1988. The harvest of fish and wildlife for subsistence by residents of Minto, Alaska. ADF&G, Div. of Subsistence, Tech. Paper No. 137. Juneau. AK.

FSB. 1995. Staff Analysis WP95-04. Pages 28–34 in Federal Subsistence Board Meeting Materials April 10–14, 1995. Office of Subsistence Management. Anchorage AK.

FSB. 2003. Staff Analysis WP03-02 and related materials. Pages 53–79 in Federal Subsistence Board Meeting Materials May 20–22, 2003. Office of Subsistence Management. Anchorage AK.

FWS. 2011. Hunter database. On file, Office of Subsistence Management. Anchorage, AK.

Magdanz, J. S., E. Trigg, A. Ahmasuk, P. Nanouk, D. S. Koster, and K. R. Kamletz. 2005. Patterns and trends in subsistence salmon harvests, Norton Sound and Port Clarence, 1994–2003. Kawerak, Inc., Dept. of Natural Resources and the ADF&G Div. of Subsistence Tech. Paper No. 294, Juneau and Nome, AK.

Magdanz, J.S., C.J. Utermohle, and R. J. Wolfe. 2002. The organization of subsistence food production in two Inupiaq communities, Wales and Deering, Alaska. ADF&G, Div. of Subsistence Tech. Paper No. 259, Juneau, AK.

Sahlins, M D. 1972. Stone age economics. Aldine Publishing Company, New York.

Sumida, V.A. 1989. Patterns of fish and wildlife harvest and use in Beaver, Alaska. ADF&G, Div. of Subsistence, Tech. Paper No. 140, Juneau, AK.

Sumida, V.A, and D.B. Andersen. 1990. Patterns of fish and wildlife use for subsistence in Fort Yukon, Alaska. ADF&G Div. of Subsistence Tech. Paper No. 179. Juneau, AK.

Wolfe, R.J. 1981. Norton Sound/Yukon Delta Sociocultural Systems Baseline Analysis, Technical Report No. 59, Alaska Department of Fish and Game, Division of Subsistence, Juneau, AK

Wolfe, R.J. 1987. The Super-Household: Specialization in Subsistence Economies, Paper presented at the 14th Annual Meeting of the Alaska Anthropological Association, March 12–13, 1987, Anchorage, AK.

Wolfe, R.J., C.L. Scott, W.E. Simeone, C.J. Utermohle, and M.C. Pete. 2007. The "Super-Household" in Alaska Native subsistence economics. National Science Foundation, ARC 0352677. Washington DC. 31 pages.

Wolfe, R.J., and R.J. Walker. 1987. Subsistence economies in Alaska: Productivity, geography, and development impacts, Arctic Anthropology 24(2): 56–81.

Wolfe, R.J., J.J. Gross, S.J. Langdon, J.M. Wright, G.K. Sherrod, L.J. Ellanna, V.Sumida, and P.J. Usher. 1984. Subsistence-based economies in coastal communities of Southwest Alaska. ADF&G, Div. of Subsistence, Tech. Paper No. 59. Juneau, AK. 270 pages.

APPENDIX A
FEDERAL DESIGNATED HUNTER—UNIT SPECIFIC REGULATIONS

§___.26(n) Unit regulations

Unit 6
(ii)(D) A Federally qualified subsistence user (recipient) who is either blind, 65 years of age or older, at least 70 percent disabled, or temporarily disabled may designate another Federally qualified subsistence user to take any moose, deer, black bear, and beaver on his or her behalf in Unit 6, and goat in Unit 6D, unless the recipient is a member of a community operating under a community harvest system. The designated hunter must obtain a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for any number of recipients, but may have no more than one harvest limit in his or her possession at any one time;

(E) A hunter younger than 10 years old at the start of the hunt may not be issued a Federal subsistence permit to harvest black bear, deer, goat, moose, wolf, and wolverine;

(F) A hunter younger than 10 years old may harvest black bear, deer, goat, moose, wolf, and wolverine under the direct, immediate supervision of a licensed adult, at least 18 years old. The animal taken is counted against the adult's harvest limit. The adult is responsible for ensuring that all legal requirements are met.

Unit 9
(iii)(E) For Units 9C and 9E only, a Federally qualified subsistence user (recipient) of Units 9C and 9E may designate another Federally qualified subsistence user of Units 9C and 9E to take bull caribou on his or her behalf unless the recipient is a member of a community operating under a community harvest system. The designated hunter must obtain a designated hunter permit and must return a completed harvest report and turn over all meat to the recipient. There is no restriction on the number of possession limits the designated hunter may have in his/her possession at any one time;

(iii)(F) For Unit 9D, a Federally qualified subsistence user (recipient) may designate another Federally qualified subsistence user to take caribou on his or her behalf unless the recipient is a member of a community operating under a community harvest system. The designated hunter must obtain a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for any number of recipients but may have no more than four harvest limits in his/her possession at any one time;

Unit 22
(iii)(E) A Federally qualified subsistence user (recipient) may designate another Federally qualified subsistence user to take musk oxen on his or her behalf unless the recipient is a member of a community operating under a community harvest system. The designated hunter must get a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for any number of recipients in the course of a season, but have no more than two harvest limits in his/her possession at any one time, except in Unit 22E where a resident of Wales or Shishmaref acting as a designated hunter may hunt for any number of recipients, but have no more than four harvest limits in his/her possession at any one time.

Unit 23

(iv)(D) For the Baird and DeLong Mountain sheep hunts—A Federally qualified subsistence user (recipient) may designate another Federally qualified subsistence user to take sheep on his or her behalf unless the recipient is a member of a community operating under a community harvest system. The designated hunter must obtain a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for only one recipient in the course of a season and may have both his and the recipients' harvest limits in his/her possession at the same time;

(iv)(F) A Federally qualified subsistence user (recipient) may designate another Federally qualified subsistence user to take musk oxen on his or her behalf unless the recipient is a member of a community operating under a community harvest system. The designated hunter must get a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for any number of recipients, but have no more than two harvest limits in his/her possession at any one time.

Unit 26

(iv)(C) In Kaktovik, a Federally qualified subsistence user (recipient) may designate another Federally qualified subsistence user to take sheep or musk ox on his or her behalf unless the recipient is a member of a community operating under a community harvest system. The designated hunter must obtain a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for any number of recipients but may have no more than two harvest limits in his/her possession at any one time;

(iv)(D) For the DeLong Mountain sheep hunts—A Federally qualified subsistence user (recipient) may designate another Federally qualified subsistence user to take sheep on his or her behalf unless the recipient is a member of a community operating under a community harvest system. The designated hunter must obtain a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for only one recipient in the course of a season and may have both his and the recipient's harvest limits in his/her possession at the same time.

APPENDIX B
STATE PROXY HUNTER REGULATIONS

5 AAC 92.011. Taking of game by proxy

(a) A resident hunter (the proxy) holding a valid resident hunting license may take specified game for another resident (the beneficiary) who is blind, physically disabled, or 65 years of age or older, as authorized by AS 16.05.405 and this section.

(d) A person may not be a proxy
(1) for more than one beneficiary at a time;
(2) more than once per season per species in Unit 13;
(3) for Tier II Caribou in Unit 13, unless the proxy is a Tier II permittee.

(j) A proxy participating in a proxy hunt must remove at least one antler from the skull plate or cut the skull plate in half, on an antlered animal, for both the proxy's animal and the beneficiary's animal before leaving the kill site, unless the department has established a requirement that complete antlers and skull plates must be submitted to the department.

(k) Proxy hunting under this section is only allowed for
(1) caribou;
(2) deer; and
(3) moose in Tier II hunts, any-bull hunts, and antlerless moose hunts.

(l) Notwithstanding (k) of this section, proxy hunting is prohibited in the following hunts where the board has determined that the use of the proxy would allow circumvention of harvest restrictions specified by the board:
(1) Unit 20(E) moose and caribou registration hunts;
(2) Units 21(B), 21(C), 21(D), and 24 moose hunts if either the proxy or the beneficiary holds a drawing permit for Units 21(B), 21(C), 21(D), or 24 moose hunts;
(3) Units 9(A) and 9(B), unit 9(C), that portion within the Alagnak River drainage, and units 17(B), 17(C), 18, 19(A), and 19(B) caribou hunts from August 1 through October 31.

WRITTEN PUBLIC COMMENTS

Support with modification to include windows. The designated hunter option is important to traditional subsistence practices and ensuring that animals are harvested correctly.

Gates of the Arctic National Park Subsistence Resource Commission

WP12-03 Executive Summary	
General Description	Proposal WP12-03 would require trappers to move a trap that incidentally harvests a moose, caribou, or deer at least 300 feet for the remainder of the regulatory year. The animal would become the property of the regional management agency. The proposed regulation asks trappers to salvage the edible meat and turn it over to the appropriate agency, but this would not be required. *Submitted by the Orutsararmiut Native Council*
Proposed Regulation	**§____.25 Subsistence taking of fish, wildlife, and shellfish: general regulations.** *(a) Definitions.* *Salvage means to transport the edible meat, skull, or hide, as required by regulation, of a regulated fish, wildlife, or shellfish to the location where the edible meat will be consumed by humans or processed for human consumption in a manner which saves or prevents the edible meat from waste, and preserves the skull or hide for human use.* *(j) Utilization of fish, wildlife, or shellfish.* *(1) You may not use wildlife as food for a dog or furbearer, or as bait . . . except for the following:* *(i) The hide, skin, viscera, head, or bones of wildlife.* *(3) You must salvage the edible meat of ungulates, bear, grouse, and ptarmigan.* **§___.26 Subsistence taking of wildlife.** *(b) Except for special provisions found at paragraphs (n)(1) through (26) of this section, the following methods and means of taking wildlife for subsistence uses are prohibited:* *(10) Using a trap to take ungulates or bear.* ***Continuing to take, or attempting to take, furbearers at a site where a moose, caribou, or deer has been taken incidentally is a violation. Any moose, caribou or deer that dies as a result of being caught in a trap or snare, whether found dead or euthanized, becomes the property of the regional management agency. The trapper should salvage edible meat and surrender it to the appropriate agency. A person who salvages and surrenders the edible meat in accordance with this regulation will not be subject to citation. If such an incidental take occurs, the trapper must move all active traps and snares at least 300 feet from the site for the remainder of the regulatory year (July 1 through June 30), and after the ending of the July 1 – June 30 regulatory year, may reset again in the same place or area during subsequent trapping seasons.***

continued on next page

WP12-03 Executive Summary *(continued)*	
OSM Preliminary Conclusion	**Oppose**
Southeast Regional Council Recommendation	
Southcentral Regional Council Recommendation	
Kodiak/Aleutians Regional Council Recommendation	
Bristol Bay Regional Council Recommendation	
Yukon/Kuskokwim Delta Regional Council Recommendation	
Western Interior Regional Council Recommendation	
Seward Peninsula Regional Council Recommendation	
Northwest Arctic Regional Council Recommendation	
Eastern Interior Regional Council Recommendation	
North Slope Regional Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP12-03

ISSUES

Proposal WP12-03, submitted by the Orutsararmiut Native Council, would require trappers to move a trap that incidentally harvests a moose, caribou, or deer at least 300 feet for the remainder of the regulatory year. The animal would become the property of the regional management agency. The proposed regulation asks trappers to salvage the edible meat and turn it over to the appropriate agency, but this would not be required.

DISCUSSION

The proponent intends to protect trappers from enforcement action by more clearly writing a provision into Federal wildlife regulations that is currently only in State wildlife regulations. The proponent indicates that State enforcement officers do not always understand the State regulations concerning the actions trappers must undertake when they take a moose, caribou, or deer incidental to trapping furbearers. The proponent states that trappers have been bothered by State enforcement officers with citations that were later dismissed. Specifically, a trapper was cited for locating a trap at the same location where the trap had incidentally harvested a moose the previous regulatory year. As described below, the activity is allowed in State trapping regulations (5 AAC 92.095(a)(12)). The trapper was freed from having to pay the fine, but had to pay the legal costs of defending himself. It appears the State officer interpreted one year to mean one calendar year (January 1–December 31), while the State regulation indicates one regulatory year (July 1–June 30).

By making this proposal, the Fish and Wildlife Committee of the Orutsararmiut Native Council is responding to concerns brought by tribal members (Roczicka 2011, pers. comm.). The Orutsararmiut Native Council is the Federally recognized Indian Reorganization Act (IRA) Council representing the community of Bethel.

Existing Federal Regulation

§____.25 Subsistence taking of fish, wildlife, and shellfish: general regulations.

(a) Definitions.

Salvage means to transport the edible meat, skull, or hide, as required by regulation, of a regulated fish, wildlife, or shellfish to the location where the edible meat will be consumed by humans or processed for human consumption in a manner which saves or prevents the edible meat from waste, and preserves the skull or hide for human use.

(j) Utilization of fish, wildlife, or shellfish.

(1) You may not use wildlife as food for a dog or furbearer, or as bait . . . except for the following:

(i) The hide, skin, viscera, head, or bones of wildlife.

(3) You must salvage the edible meat of ungulates, bear, grouse, and ptarmigan.

§___.26 Subsistence taking of wildlife.

(b) Except for special provisions found at paragraphs (n)(1) through (26) of this section, the following methods and means of taking wildlife for subsistence uses are prohibited:

(10) Using a trap to take ungulates or bear.

Proposed Federal Regulation

§____.25 Subsistence taking of fish, wildlife, and shellfish: general regulations.

(a) Definitions.

Salvage means to transport the edible meat, skull, or hide, as required by regulation, of a regulated fish, wildlife, or shellfish to the location where the edible meat will be consumed by humans or processed for human consumption in a manner which saves or prevents the edible meat from waste, and preserves the skull or hide for human use.

(j) Utilization of fish, wildlife, or shellfish.

(1) You may not use wildlife as food for a dog or furbearer, or as bait . . . except for the following:

(i) The hide, skin, viscera, head, or bones of wildlife.

(3) You must salvage the edible meat of ungulates, bear, grouse, and ptarmigan.

§___.26 Subsistence taking of wildlife.

(b) Except for special provisions found at paragraphs (n)(1) through (26) of this section, the following methods and means of taking wildlife for subsistence uses are prohibited:

(10) Using a trap to take ungulates or bear. ***Continuing to take, or attempting to take, furbearers at a site where a moose, caribou, or deer has been taken incidentally is a violation. Any moose, caribou or deer that dies as a result of being caught in a trap or snare, whether found dead or euthanized, becomes the property of the regional management agency. The trapper should salvage edible meat and surrender it to the appropriate agency. A person who salvages and surrenders the edible meat in accordance with this regulation will not be subject to citation. If such an incidental take occurs, the trapper must move all active traps and snares at least 300 feet from the site for the remainder of the regulatory year (July 1 through June 30), and after the ending of the July 1 – June 30 regulatory year, may reset again in the same place or area during subsequent trapping seasons.***

Existing State Regulation

5 AAC 92.085. Unlawful methods of taking big game; exceptions

The following methods and means of taking big game are prohibited . . . :

(6) with the use of a trap or snare . . . .

5 AAC 92.095. Unlawful methods of taking furbearers; exceptions

a) The following methods and means of taking furbearers under a trapping license are prohibited . . . :

(12) by placing or leaving an active trap or snare set on land that is within 300 feet of the site at which a moose, caribou, or deer was taken using a trap or snare; this prohibition applies for the duration of the regulatory year in which the moose, caribou, or deer was taken using the trap or snare.

5 AAC 92.210. Game as animal food or bait

A person may not use game as food for a dog or furbearer, or as bait . . . .

5 AAC 92.220. Salvage of game meat, furs, and hides

(d) A person taking game not listed in (a) of this section shall salvage for human consumption all edible meat, as defined in 5 AAC 92.990.

(h) A game animal taken in violation of AS 16 or a regulation adopted under AS 16 is the property of the state.

5 AAC 92.990. Definitions

(49) "salvage" means to transport the edible meat, skull, or hide, as required by statute or regulation, of a game animal or wild fowl to the location where the edible meat will be consumed by humans or processed for human consumption in order to save or prevent the edible meat from waste, and the skull or hide will be put to human use.

16.30.010. Wanton waste of big game animals and wild fowl

(a) It is a class A misdemeanor for a person who kills a big game animal or a species of wild fowl to fail intentionally, knowingly, recklessly, or with criminal negligence to salvage for human consumption the edible meat of the animal or fowl.

Extent of Federal Public Land

This proposal would apply to the entire state. Federal public lands comprise approximately 65% of Alaska and consist of 23% Bureau of Land Management, 15% National Park Service, 21% Fish and Wildlife Service, and 6% Forest Service lands.

Regulatory History

The use of traps to harvest caribou, moose, and deer is prohibited in State and Federal wildlife regulations primarily because traps set for moose, caribou, and deer do not discriminate between animals, such as, cows, bulls, and fawns.

A good estimate of how often moose, caribou, or deer are caught in traps set for furbearers statewide, or by region, is not known at this time (Ardizzone 2011, pers. comm.; Seavoy 2011, pers. comm). State and Federal staff generally assume that low levels of incidental harvests occur and are ongoing. Snare

height above ground, trap location, bait type, location of trail snares, et cetera, are effective techniques to select for targeted furbearers and against non-targeted animals. Occasionally, non-targeted animals are caught, but trappers use techniques to avoid them, and that is one reason there are low levels of incidental harvests (Seavoy 2011, pers. comm.).

Federal regulations require that wildlife caught incidental to trapping furbearers be salvaged (§__.25(j)(3)), and only the hide, skin, viscera, head, or bones may be used for bait (§__.25 (j)(1)(i)).

In 1998, the Alaska Board of Game adopted a proposal (Proposal 103) submitted by ADF&G describing the actions trappers must take when they incidentally harvest a moose, caribou, or deer in a trap; for the remainder of the regulatory year (until June 30), a trapper must move the trap at least 300 feet from the site the animal was taken (5 AAC 92.095(a)(12)). Additionally, the animal must be salvaged (5 AAC 92.220(d)) and its parts cannot be used for bait (5 AAC 92.210). Moving the trap from the site of the incidental harvest denies trappers the benefit of continuing to set a trap at a kill site, which may attract furbearers (ADF&G 1998; Rearden 2011, pers. comm.).

Effects of the Proposal

If this proposal is adopted, Federal subsistence users would be required to move a trap for the remainder of the regulatory year when it has taken a moose, caribou, or deer incidental to trapping furbearers. This would be required if the incidental harvest occurred on Federal public lands using Federal trapping regulations. The use of traps to harvest caribou, moose, and deer is prohibited in Federal and State regulations primarily because traps do not discriminate between animals, such as, cows, bulls, and fawns. However, these animals are occasionally caught in traps set for furbearers. The regulations prohibiting the use of traps and snares are not directed at trappers and are enforced because of the nondiscriminatory nature of the method, just described. Requiring a trapper to move a trap would be a hardship that would not conserve caribou, moose or deer.

OSM PRELIMINARY CONCLUSION

Oppose Proposal WP12-03.

Justification

The clear intent of the proponent is to import State wildlife regulations into Federal wildlife regulations and to clarify their intent to law enforcement officers so that other trappers who comply with State regulations are not cited. However, benefits to Federal subsistence users or resource conservation cannot be demonstrated. The State's concern is ungulate's being used as bait, and it is not in the interest of Federal subsistence users for the Federal Subsistence Management Program to impose this regulation on them.

LITERATURE CITED

ADF&G. 2011. 2010/2011 Alaska trapping regulations. http://www.adfg.alaska.gov/index.cfm?adfg=wildliferegulations.main, accessed June 1. Juneau, AK.

ADF&G. 1998. Alaska Board of Game Proposal 103. On file, Boards Support Section. Juneau. AK.

Ardizzone, C. 2011. Chief, Wildlife Division. Personal communication: in person. FWS, Office of Subsistence Management, Anchorage, AK.

Rearden, S. 2011. Wildlife biologist. Personal communications: by telephone. FWS, Yukon Delta National Wildlife Refuge, Bethel, AK.

Roczicka, G. 2011. Director, Natural Resources Department. Personal communication: by telephone. Orutsararmiut Native Council, Bethel, AK.

Seavoy, R. 2011. Wildlife biologist. Personal communication: by telephone. ADF&G, Division of Wildlife Conservation, McGrath, AK.

WP12-22a Executive Summary	
General Description	Proposal WP12-22a requests that the Federal Subsistence Board recognize Ninilchik's customary and traditional uses of brown bear in Units 8 and 15. A related analysis, WP12-22b, addresses hunting seasons and harvest limits for brown bear. *Submitted by the Ninilchik Traditional Council*
Proposed Regulation	**Unit 8—Brown bear** *Rural residents of Old Harbor, Akhiok, Larsen Bay, Karluk, Ouzinkie, ~~and~~ Port Lions,* ***and Ninilchik*** **Unit 15~~C~~—Brown bear** *Residents of Ninilchik* ~~**Unit 15 Remainder—Brown bear**~~ ~~*No Federal subsistence priority*~~
OSM Preliminary Conclusion	**Support**
Southcentral Regional Council Recommendation	
Kodiak/Aleutians Regional Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP12-22a

ISSUES

Proposal WP12-22a, submitted by the Ninilchik Traditional Council, requests that the Federal Subsistence Board recognize Ninilchik's customary and traditional uses of brown bear in Units 8 and 15. A related analysis, WP12-22b, addresses hunting seasons and harvest limits for brown bear.

DISCUSSION

The Federal Subsistence Board previously recognized Ninilchik's customary and traditional uses of brown bear in Unit 15C in 2007. The proponent states that opportunity for residents of Ninilchik to harvest brown bear has been limited due to the small amount of Federal public lands in Unit 15C. The proponent requests that the Federal Subsistence Board recognize Ninilchik's customary and traditional uses of brown bear in Units 15A and 15B, as well as 15C. Further, the proponent requests the Board recognize their customary and traditional uses of brown bear in Unit 8, the Kodiak Archipelago.

Only Ninilchik's customary and traditional uses of brown bear in Units 8 and 15 are described below; when a proposal requests adding a community to an existing customary and traditional use determination, only the customary and traditional uses in the area indicated in the determination by that community are analyzed.

Since the implemention in 2007 of the Federal brown bear hunt, which is limited to the Federal public lands in Unit 15C, the opportunity for residents of Ninilchik to harvest brown bear in Unit 15 has decreased; in 2007, the State replaced a registration permit hunt with several drawing permit hunts in Unit 15. The draw rate for these permits is low, and it is difficult to get one.

The Board has previously recognized Ninilchik's customary and traditional uses of black bear and moose in Units 15A, 15B, and 15C, and all fish in the Kasilof River and Kenai River drainages located in Units 15A, 15B, and 15C.

Existing Federal Regulation

Unit 8—Brown bear

Rural residents of Old Harbor, Akhiok, Larsen Bay, Karluk, Ouzinkie, and Port Lions

Unit 15C—Brown bear

Residents of Ninilchik

Unit 15 Remainder—Brown bear

No Federal subsistence priority

Proposed Federal Regulation

Unit 8—Brown bear

Rural residents of Old Harbor, Akhiok, Larsen Bay, Karluk, Ouzinkie, ~~and~~ Port Lions, ***and Ninilchik***

Unit 15 ~~C~~ —Brown bear

Residents of Ninilchik

~~**Unit 15 Remainder—Brown bear**~~

~~*No Federal subsistence priority*~~

Existing State Regulation

5 AAC 99.025. Customary and traditional uses of game populations

Unit 8—Brown bear

Negative

Unit 15C—Brown bear

Negative

Extent of Federal Public Land

Federal public lands comprise approximately 41% of Unit 8 and consist of U.S. Fish and Wildlife Service lands within the Kodiak National Wildlife Refuge.

In Unit 15, 52% of the lands are managed by the Kenai National Wildlife Refuge. Less than 1% is Kenai Fjords National Park lands, which are not open to subsistence uses, and less than 1% is Forest Service lands. Kenai National Wildlife Refuge manages 67% of the lands in Unit 15A; 88% of the lands in Unit 15B; and 29% of the lands in Unit 15C.

Background

Unit 8

At the inception of the Federal Subsistence Management Program in Alaska in 1990, the Federal Subsistence Board adopted the customary and traditional use determinations from the State. The State did not recognize customary and traditional uses of Unit 8 brown bear. As a consequence, the Federal Subsistence Board adopted a no Federal subsistence priority, customary and traditional use determination for brown bear in Unit 8 (72 FR 22959; May 29, 1992). This meant that no person was eligible to harvest brown bear in Unit 8 under Federal regulations; the harvest of brown bear was allowed under State regulations only.

In 1995, the Kodiak Aleutians Subsistence Regional Advisory Council submitted Proposals WP95-26 and WP95-27 to recognize the customary and traditional uses of brown bear in Unit 8 by residents of the

villages on the island and to adopt hunting seasons and harvest limits. However, the Kodiak Aleutians Council recommended that the Federal Subsistence Board defer Proposal WP95-27, the hunting seasons and harvest limits, allowing the Council time to evaluate the impacts of using a community harvest system versus an individual harvest system. The Federal Subsistence Board, at its meeting in April 1996, adopted Proposal WP95-26 (61 FR 39703; July 30, 1996). Subsequently in April 1997, the Board adopted hunting seasons and community harvest limits for Unit 8 brown bear (62 FR 29040; May 29, 1997).

Unit 15

In 1990, the majority of the Kenai Peninsula was in the Kenai Peninsula nonrural area established by the State. The State did not allow subsistence uses in nonrural areas. Further, the Alaska Board of Game did not recognize customary and traditional uses of brown bear in the areas that were deemed rural (the southern portion of Unit 15C). As a result, the Federal Subsistence Board established a no Federal subsistence priority for brown bear throughout the peninsula (72 FR 22959 (May 29, 1992); see **Appendix A**). This meant that no person was eligible to harvest brown bear in Unit 15 under Federal regulations; the harvest of brown bear was allowed under State regulations only.

In 2006, the Ninilchik Traditional Council submitted Proposal WP07-17a to recognize the customary and traditional uses of brown bear in Unit 15 by residents of Ninilchik, and to adopt hunting seasons and harvest limits (WP07-17b). At its March 2007 meeting, the Southcentral Alaska Subsistence Regional Advisory Council recommended that the Board support Proposal WP07-17a, recognizing Ninilchik's customary and traditional uses of brown bear in Unit 15 (SCRAC 2007).[1]

In April 2007, the Federal Subsistence Board adopted Proposal WP07-17a with modification to provide a customary and traditional use determination for brown bear for Ninilchik in Unit 15C only (72 FR 73433; December 27, 2007). The Board noted that opportunity to harvest brown bear by residents of Ninilchik had been limited by State regulatory restrictions. Ninilchik demonstrated long-term and regular uses of brown bear in Unit 15C in spite of decreased opportunities resulting from restrictive State harvest regulations. However, the Board did not recognize the customary and traditional uses of brown bear by Ninilchik in Units 15A and 15B because the Board viewed these uses as representing a sporadic and inconsistent pattern (FSB 2007:252–255).

About 24 instances of "no Federal subsistence priority" exist in Federal wildlife regulations. No Federal subsistence priority means that the Federal Subsistence Board has not recognized customary and traditional uses of a resource in an area, and therefore, no Federal seasons or harvest limits can be adopted. Hunting may be allowed under State regulations. Currently in Unit 15, the three instances of no Federal subsistence priority are: hunting brown bear in Units 15A and 15B, hunting sheep in Unit 15; and hunting ruffed grouse in Unit 15.

Since adopting State customary and traditional use determinations for wildlife in 1990, the Federal Subsistence Board has adopted or upheld a no Federal subsistence priority, customary and traditional use determinations for black bear in Units 15A and 15B (61 FR 39704; July 30, 1996) and brown bear in Units 15A and 15B (72 FR 73433; December 27, 2007). The Board subsequently adopted a customary and traditional use determination for black bear in Units 15A and 15B for Ninilchik (72 FR 73433; December 27, 2007).

1 The Federal Subsistence Board book indicates that the Council recommended the Board recognize customary and traditional uses of brown bear in Unit 15A only and is in error (FWS 2007). The Council adopted a motion supporting "17A" referring to the proposal WP07-17a. This was erroneously interpreted as Unit 15A in the Council recommendation (SWRAC 2007:547).

Regulatory History

For Units 8 and 15, since 1967 harvest limits have been one brown bear every four regulatory years and the taking of cubs, or females accompanied by cubs, has been prohibited (Miller 1990).

Unit 8

In Unit 8, a subsistence season for brown bear hunting was first established by the Alaska Board of Game in 1985. In 1986, the Alaska Board of Game recognized customary and traditional uses of brown bear in Unit 8. In that year, however, ADF&G received no requests for permits. Subsequently in 1987, the Alaska Board of Game reversed its earlier findings and determined that there were no customary and traditional uses of brown bear in Unit 8 (FWS 1996: 32). Hunting in Unit 8 was conducted using State registration and State drawing permits until 1997 when a Federal hunt was added (**Tables 1 and 2**).

Unit 15

In Unit 15, prior to 1967 the brown bear hunting season was 10 months, September through June. Since then, brown bear hunting seasons in State wildlife regulations have been restricted to a fall, or a fall and a spring, hunting period of varying lengths between approximately 15 and 45 days (**Table 3**). However, for the 1995 and 1996 regulatory years only the spring hunting season opened and the fall season was closed because additional harvest would have exceeded management objectives, described below. In 1997, a registration permit hunt system was implemented. Then, because of high levels of nonhunting human-caused mortality, the fall season was closed for the 1997 regulatory year as well as the spring season for the 1999 and 2000 regulatory years, and no permits were issued for the 1998, 2001, 2002, 2003, 2005, and 2006 regulatory years. The major causes of known nonhunting brown bear deaths were from vehicle collisions, in defense of property at residences, in defense of life by recreationists, and mistaken identity while hunting other game (FWS 2007)

Beginning in 2007, a State drawing permit was required to hunt brown bear in Unit 15 under State regulations. Also in 2007, the Federal Subsistence Board adopted seasons and harvest limits in Unit 15C that copied State seasons and harvest limits, but with the use of a Federal registration permit (**Table 4**). In 2009, the State lengthened its fall regulatory season by 15 days; however, the Federal regulatory season has not changed since its inception in 2007, and therefore, the brown bear season begins 15 days later in Unit 15C for Federally qualified users (Ninilchik residents) using a Federal registration permit.

The Alaska Department of Fish and Game has used a quota system to aid in management of brown bear in Unit 15. For the 2010 regulatory year, the take of brown bear was not to exceed 10 reproductive-age females in the calendar year by all human causes. Hunting for brown bear under State and Federal regulations was allowed only if the number of nonhunting human caused brown bear deaths was below this quota (Selinger 2011, pers. comm.)

It should be noted that Ninilchik residents who harvest brown bear with a Federal registration permit must salvage the hide, skull, and edible meat (§____.25(a) and §____.25 (j)(2)(ii)).

Community Characteristics

The only community under consideration in this proposal is Ninilchik. For the purpose of the customary and traditional use determinations for Ninilchik, the designation “Ninilchik” includes the Ninilchik census designated place (CDP) and the adjacent Happy Valley CDP. According to the U.S. Census, Ninilchik had 883 residents and Happy Valley had 593 residents in 2010 (ADCCEDa 2011).

Table 1. State Unit 8 brown bear regulations.

State of Alaska Regulations, Brown Bear			
Regulatory Year	**Area**	**Season**	**Harvest Limit**
1989–1992	Unit 8, northeastern portion of Kodiak Island	Fall season (Oct. 25–Nov. 30) Spring season (Apr. 1–May 15)	1 brown bear every four regulatory years by State registration permit.
	Unit 8, remainder	Fall season (Oct. 25–Nov. 30) Spring season (Apr. 1–May 15)	1 bear every four regulatory years. Residents may take bear by State drawing permit only; nonresidents guided by a commercial guide may take bear by State registration permit only.
1993	Unit 8, northeastern portion of Kodiak Island	Fall season (Oct. 25–Nov. 30) Spring season (Apr. 1–May 15)	1 brown bear every four regulatory years by State registration permit **available in person in Kodiak beginning Oct. [x]**. 1 brown bear every four regulatory years by State registration permit **available beginning March [x].**
	Unit 8, remainder	Fall season (Oct. 25–Nov. 30) Spring season (Apr. 1–May 15)	1 bear every four regulatory years. Residents may take bear by State drawing permit only; nonresidents guided by a commercial guide may take bear by State registration permit only.
1994–2011	Unit 8, northeastern portion of Kodiak Island	Fall season (Oct. 25–Nov. 30) Spring season (Apr. 1–May 15)	1 brown bear every four regulatory years by State registration permit available in person in Kodiak beginning Oct. [X]. 1 brown bear every four regulatory years by State registration permit available beginning March [X].
	Unit 8, remainder	Fall season (Oct. 25–Nov. 30) Spring season (Apr. 1–May 15)	1 bear every four regulatory years **by State drawing permit**

Note: changes are indicated in bold.
[x]=date varies.

Table 2. Federal Unit 8 brown bear regulations.

Federal Regulations, Brown Bear			
Regulatory Year	**Area**	**Season**	**Harvest Limit**
1990–1996	Unit 8	No season	No harvest limit
1997–2012	Unit 8	**Dec. 1–Dec. 15** **Apr. 1–May 15**	**1 brown bear by Federal registration permit issued by the Kodiak National Wildlife Refuge Manager and per community as follows:** **Akhiok—1 permit** **Karluk—1 permit** **Larsen Bay—Up to 3 permits** **Old Harbor—Up to 2 permits** **Ouzinkie—Up to 2 permits** **Port Lions—Up to 2 permits**

Notes: changes are indicated in bold.

Happy Valley CDP is a census designated place created by the U.S. Census and also is considered a residential extension of Ninilchik. Happy Valley was first noted in 1950 by the U.S. Geological Survey and is simply noted as a "geographic location" (ADCCEDb 2011). There are no facilities, no schools, no post office, and no government. Students who reside in Happy Valley go to school in Ninilchik and Happy Valley residents primarily receive their mail in Ninilchik. The Ninilchik tribal government and the Kenai Peninsula Borough are the only local governments in the Ninilchik area; there is no local municipal government (Wolfe 2006a).

Long-term residents of Ninilchik trace their origins to the descendents of Alaska Natives (predominately Alutiiq from Kodiak Island) who married Russian American Company employees and settled on the Kenai Peninsula in the Ninilchik area in 1847 (Wolfe 2006a, 2006b; Arndt 1993: 40). The children of the marriages between Russians and Alutiiqs were referred to as "Creoles" by the Russians (Arndt 1993:40, 42; Fedorova 1973:33). The original inhabitants of Ninilchik came to the Kenai Peninsula and settled within the traditional territory of two Alaska Native groups: Dena'ina Athabascan and Alutiiq. The traditional territory of the Dena'ina extends from Kachemak Bay on the Kenai Peninsula, west across Cook Inlet to the Stony River and northeast to the Susitna Basin. The traditional territory of the Alutiiq includes the southern portion of the Kenai Peninsula, bridging the Alutiiq territories of Prince William Sound with Kodiak Island and the Alaska Peninsula (De Laguna 1934, Krauss 1982, and Stanek 1980).

The U.S. Census in 1880 enumerated the population at Ninilchik as 53 "Creoles" (Fall et al. 2004:33). The U.S. Census in 1890 described the population of Ninilchik as "inhabited by 50 Russian creoles and a small number of natives of the Tnaina tribe" (Porter 1893: 69). The population of Ninilchik was enumerated in 1890 as "12 White, 53 Mixed, 16 Indian" (Porter 1893: 4). Thereafter, the Ninilchik population increased naturally, through kinship relationships and intermarriage with Alutiiq and Dena'ina, and through the in-migration of people from Outside.

Table 3. State Unit 15 brown bear regulations.

State of Alaska Regulations, Brown Bear			
Regulatory Year	**Area**	**Season[1]**	**Harvest Limit**
1959–1966	Unit 15	Sept.–June	1 brown bear every year
1967–1977	Unit 15	**Fall season only**	1 brown bear **every four regulatory years**
1978–1996	Unit 15	Fall season **Spring season**	1 brown bear every four regulatory years
1997–2003	Unit 15	Fall season Spring season	1 brown bear every four regulatory years **by State registration permit**
2004	Unit 15	Fall season	1 brown bear every four regulatory years by State registration permit **available in person in Homer, Soldotna, or Anchorage, or by mail from Homer, beginning Oct. 10**
2005–2006	Unit 15	Fall season	1 brown bear every four regulatory years by State registration permit **available in person in Homer, Soldotna, or Anchorage beginning Oct. 10**
2007–2008	Unit 15	Fall season (Oct. 1–Nov. 30) **Spring season (Apr. 1–June 15)**	1 brown bear every four regulatory years by **State draw permit**
2009–2010	Unit 15	Fall season (**Sept. 15**–Nov. 30) Spring season (Apr. 1–June 15)	1 brown bear every four regulatory years by State draw permit

[1] Fall seasons were closed for the 1995, 1996, and 1997 regulatory years. Spring seasons were closed for the 1999 and 2000 regulatory years. No permits were issued for the 1998, 2001, 2002, 2003, 2005, and 2006 regulatory years.

Note: changes are indicated in bold.

Non-Native settlement on the Kenai Peninsula began in the 18th century with the Russians and the fur trade and later mining efforts in Kachemak Bay. At the end of the 19th century, commercial fishing, such as the herring saltery at Seldovia in 1896, brought about new settlements. The next major non-Native settlement period began during the Gold Rush era at the end of the 19th century. With the construction of roads and local oil development after 1950, the population of the Kenai Peninsula increased substantially through in-migration of people born outside Alaska. The Ninilchik area population grew through in-migration and became more demographically diverse (Wolfe 2006a).

Table 4. Federal Unit 15 brown bear regulations.

Federal Regulations, Brown Bear			
Regulatory Year	**Area**	**Season**	**Harvest Limit**
1990–2006	Unit 15	No season	No harvest limit
2007–2012	**Unit 15C**	**Oct. 1–Nov. 30 (Season to be announced) Apr. 1–June 15 (Season to be announced)**	**1 bear every four regulatory years by Federal registration permit. The season may be opened or closed by announcement of the Kenai National Wildlife Refuge manager in consultation with ADF&G and the chair of the Southcentral Alaska Subsistence Regional Advisory Council**
	Unit 15 remainder	No season	No harvest limit

Note: changes are indicated in bold.

Eight Factors for Determining Customary and Traditional Uses

A community or area's customary and traditional use is generally exemplified through the following eight factors: (1) a long-term, consistent pattern of use, excluding interruptions beyond the control of the community or area; (2) a pattern of use recurring in specific seasons for many years; (3) a pattern of use consisting of methods and means of harvest which are characterized by efficiency and economy of effort and cost, conditioned by local characteristics; (4) the consistent harvest and use of fish or wildlife as related to past methods and means of taking: near, or reasonably accessible from the community or area; (5) a means of handling, preparing, preserving, and storing fish or wildlife which has been traditionally used by past generations, including consideration of alteration of past practices due to recent technological advances, where appropriate; (6) a pattern of use which includes the handing down of knowledge of fishing and hunting skills, values, and lore from generation to generation; (7) a pattern of use in which the harvest is shared or distributed within a definable community of persons; and (8) a pattern of use which relates to reliance upon a wide diversity of fish and wildlife resources of the area and which provides substantial cultural, economic, social, and nutritional elements to the community or area.

The Federal Subsistence Board makes customary and traditional use determinations based on a holistic application of these eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)). In addition, the Board takes into consideration the reports and recommendations of any appropriate Regional Advisory Council regarding customary and traditional use of subsistence resources (50 CFR Part 100.16(b) and 36 CFR 242.16(b)). The Board makes customary and traditional use determinations for the sole purpose of recognizing the pool of users who meet the eight factors. The Board does not use such determinations for resource management or restricting harvest. If a conservation concern exists for a particular population, the Board addresses that concern through the imposition of harvest limitations or seasonal restrictions rather than by limiting the customary and traditional use finding.

Ninilchik residents have used a wide array of fish and wildlife resources since the founding of the community in 1847. The site was chosen so that retirees, who included Alutiiqs, Russians, and Creoles, from the Russian-American Company would be able to support themselves by harvesting wild resources and gardening (Arndt 1993:2).

It is important to understand the history of the Ninilchik subsistence economy in the context of the Russian colonial period. The success of the Russian-American Company depended entirely on the subsistence way of life of the indigenous inhabitants of Alaska (Fedorova 1975:10). The primary goal of the company was the harvest of fur, mainly sea otter. The specialized sea otter hunting techniques and capabilities of the Unangan (Aleuts) of the Aleutian Islands and the Alutiiq people, primarily of Kodiak, were exploited for the success of the Company. Beyond furs, however, the subsistence harvest was the primary food supply that sustained Company enterprises (Fedorova 1973). Importing supplies overland through Siberia and by sea was expensive, slow, and often unsuccessful. In addition to harvesting sea otters, the Native inhabitants of Alaska were required to provide the bulk of the food for the Russian colonists in addition to their own. The Russians attempted to supply the colonies with food through agriculture and cattle husbandry. These attempts provided some food but never the amounts the colony needed (Fedorova 1973, 1975; Tikhmenev 1978).

The Russian settlers adapted to the subsistence diet of Alaska. According to one Russian officer in a report on the state of the colonial settlements:

> The location and abundance of the pasturage would let them have any number of cattle, were it not for the difficulty of preparing winter fodder . . . . The ration of the Russian settler on Kodiak included mushrooms and berries . . . . Game and bear meat were of great help for the settlers . . . . The Kodiak promyshlenniks [Russian fur traders] kill many thousands of bears but they do not die out . . . . The most important food is fish (Fedorova 1973: 239).

There is not an abundance of ethnographic information about the "Creole" communities of Alaska because early anthropologists only wanted to study communities they believed had not had contact with other cultures. In writing about the Alutiiq of Kodiak, anthropologist Frederica de Laguna noted in 1964:

> In appraising cultural similarities and dissimilarities . . . we are bound to be subjective in our judgment because we can not help using those cultures with which we are most familiar as standards against which others are to be measured. Thus the northern Alaskan Eskimo are assumed, perhaps unconsciously, to constitute a norm of the typical Alaskan Eskimo from which the less familiar Pacific Eskimo appear divergent, or as intermediate between the "true Eskimo" and the Aleut (De Laguna 1964: 211).

There is not extensive documentation of Ninilchik's subsistence patterns because they were not considered a "norm" by early cultural anthropologists. In the information that is available, it is clear that brown bear is part of the subsistence diet of Ninilchik (cf. Elliot 1887, Fall et al. 2000, FWS 2007, Leman 1993, Ninilchik Parent Teacher Association nd [1951], NTC 1999, Oskolkoff 1992, Tikhmenev 1978) and of the Dena'ina and local Kenaitze (cf. Fall et al. 2000, Osgood 1966).

At the April 1995, meeting of the Federal Subsistence Board, Grassim Oskolkoff, past president of the Ninilchik Traditional Council, described the use of bear by Ninilchik residents:

> Just yesterday I came from my acreage in the woods there, and looking for bear tracks. And they all look at me and say—I know they're talking about me—how come you're looking for bear track? I am looking for bear track because it was traditional. It was what we did. In spring, people

> would look for young black bear especially, that was a delicacy. And we tried to get. And of course, the big brown bear for fur, for—'cause you could sell those things. Even at that time, you could sell those things for 2 or 3 hundred dollars which is a lot of money. . . . My dad did, him and Matsen (ph), another family there, and Marian's dad and whatnot. They used to go up in the hills—Caribou Hills is what we call—what you know about probably—and get that big—brownie and roll up—skin him and roll up the hide and carry that thing all the way from Caribou Hills down to Deep Creek, mouth of Deep Creek. That's where they would—where they're fishing now, what we're talking about. And cross over there with that bear hide and bring it to Ninilchik and hang it up. Of course, all of us kids, we'd go and turn that thing over and play on the fur, just like a bunk (FSB 1995: 594–595).

Most of the Caribou Hills is located within the boundaries of the Kenai National Wildlife Refuge. This story of walking to the Caribou Hills and probably floating back to the mouth of Deep Creek is not unusual for residents of Ninilchik prior to the construction of the highway in 1951. There are at least two references to long walks in Agrafena's Children that recount walks from Ninilchik to Kenai and Ninilchik to Homer (Leman 1993: 359, 362). The book, Agrafena's Children by Wayne Leman, is a "family history" or chronicle of the original inhabitants of Ninilchik.

Ninilchik is a coastal community, and fish are a large part of the local diet, as are moose, but plants, birds and other large land mammals, including brown bear, are part of the diversified subsistence repertoire.

There are at least five sources of data related to Ninilchik subsistence harvests. Sources include two studies completed by the ADF&G Division of Subsistence, and two completed by the Ninilchik Traditional Council. These studies have helped our understanding of the extent of the use of brown bear by residents of Ninilchik and other communities on the Kenai Peninsula. A fifth source is the ADF&G and FWS permit report database.

ADF&G Division of Subsistence Studies: 1982 and 1998

Two studies of Ninilchik subsistence uses are considered in this analysis. These include: 1) ADF&G, Division of Subsistence Technical Paper 106, which includes residents' harvest estimates for the calendar year 1982 (Reed 1985) and 2) ADF&G, Division of Subsistence Technical Paper 253, which includes residents' harvest estimates for the calendar year 1998 (Fall et al. 2000). These two studies differ in sample size and also in sample area. The 1982 study included only the Ninilchik CDP; the 1998 study included the "Ninilchik rural area" which included the Ninilchik CDP, the Happy Valley CDP, and Clam Gulch CDP (Fall et al. 2000: 26).

1982 ADF&G Division of Subsistence Technical Paper 106 "*The Role of Wild Resource Use in Communities of the Central Kenai Peninsula and Kachemak Bay, Alaska*" included subsistence harvest data from the communities of Kenai, Homer, Ninilchik and Seldovia for the calendar year 1982 (Reed 1985). There were an estimated 217 households in Ninilchik (CDP) at the time of the study (Reed 1985:8). Twenty-four households were interviewed as part of this study, 11% of the community (Reed 1985:8). The survey used for this research included most subsistence resources available on the Kenai Peninsula but did not include brown bear. It does not appear that participants were asked about subsistence uses of brown bear for the 1982 survey year (Reed 1985:202–210).

Reed noted that in the study communities, "There appeared to be no stable seasonal round and harvest quantities were relatively low. However, with such a large study population, the representativeness of the findings was difficult to ascertain" (Reed 1985:7). Reed observed that the harvest of large land mammals in Ninilchik was secondary to the harvest of fish and seafood, "Reasons given for this included

a perceived scarcity of game, excessive hunting competition, short seasons and the lack of the necessary skill and equipment" (Reed 1985:82).

1998 ADF&G Division of Subsistence Technical Paper 253 "*Wild Resource Harvests and Uses by Residents of Selected Communities of the Kenai Peninsula Borough*" included subsistence harvest data from Ninilchik, North Fork Road, Fritz Creek East, and Nikolaevsk for the calendar year 1998. Each was considered a separate community. Ninilchik was defined as the Happy Valley CDP, Ninilchik CDP, and almost all of the Clam Gulch CDP; about a 30-mile stretch along the Sterling Highway from Clam Gulch at about Milepost 121 to Stariski Creek at Milepost 151. In Ninilchik, there were an estimated 400 households at the time of the study (Fall et al. 2000:21). The sample size was 25% of the community or 101 households. Results from the sample were expanded to represent the entire community.

This study indicated that in 1998, 2% (8 households within the entire community of 400 households) of Ninilchik households tried to harvest brown bear and that none used, harvested, received or shared it (Fall et al. 2000: 93). In addition to harvest data, residents were asked about the location of their harvests. In table 64 (Fall et al. 2000:133), 1% (4 households of 400) reported hunting (not harvesting) brown bear in Unit 15B within the Kenai National Wildlife Refuge and 1% (4 households of 400) reported hunting brown bear elsewhere. There was no other brown bear hunt location noted in this table by residents of Ninilchik (Fall et al. 2000: 133).

In contrast to the other communities in this study it was noted, "Only in Ninilchik were there any brown bear hunters; this activity occurred within the refuge boundaries in Unit 15B and off the Kenai Peninsula" (Fall et al. 2000: 186).

Ninilchik Traditional Council

Two studies of Ninilchik subsistence uses conducted by the Ninilchik Traditional Council, funded by the Bureau of Indian Affairs, are considered in this analysis. These include a study conducted in 1994 and another conducted in 1999. These studies were not random samples of the community but were targeted specifically at long-term residents of the community. The purpose of these studies was to document the lifetime subsistence use areas of Ninilchik. The 1994 study included participant households' harvest estimates of lifetime use. The 1999 study included participant households' harvest estimates between 1994 and 1999 (NTC 2006). This was intentionally different from most ADF&G Division of Subsistence studies, which rely on a specific year of harvest information.

1994 A 1994 survey of 26 targeted Ninilchik households indicated that 5 households of 26 sampled households used brown bear, 4 of 26 households tried to harvest it, 5 of 26 households received brown bear, and 5 of 26 households shared brown bear. Respondents reported attempting to harvesting brown bear at some point in their lifetimes in Units 15A, 15B, 15C, and in Unit 8, Kodiak (NTC 2006:8).

1999 The targeted survey sample of Ninilchik households for the 1999 study included 21 households. Respondents were asked to describe their subsistence harvest from 1994 to 1999. Ninilchik Traditional Council staff used a baseline subsistence survey questionnaire modeled after, but not the same as, that used by ADF&G Division of Subsistence. This similarity is noted because beyond asking respondents how many of which resource they harvested, they were also asked about harvest effort and sharing.

According to the Ninilchik Traditional Council research in 1999, the 21 households surveyed reported that no Ninilchik households used, tried to harvest, harvested, received or shared brown bear from 1994 to 1999 (NTC 2006:8).

ADF&G and U.S. Fish and Wildlife Service Permit Report Database

In addition to the sources noted above, information exists concerning hunting brown bear by Ninilchik residents based on the combined ADF&G and U.S. Fish and Wildlife Service permit report database (FWS 2011).

Unit 8

Brown bear hunting in Unit 8 has been conducted with State registration permits and State drawing permits since at least 1989 (see **Table 1**). Hunter success rates are one measure of hunting opportunity. **Table 5** shows hunter success rates using State registration and State drawing permits. The number of applications received for drawing permits is not available at this time and therefore the ability of residents of Ninilchik to hunt using a drawing permit in Unit 8 could not be measured. The hunter success rates using a State drawing permit was generally over 50%, and the hunter success rates using State registration permits were lower, generally under 20%.

Residents of Ninilchik have hunted brown bear in Unit 8. **Table 6** shows brown bear hunting and harvest activity in Unit 8 by residents of Ninilchik. Since 1986, 17 permits have been issued to residents of Ninilchik to hunt brown bear in Unit 8, and 9 hunters reported harvesting 4 brown bear.

Unit 15

The ADF&G and U.S. Fish and Wildlife Service permit report database (FWS 2011) contains information describing Ninilchik's brown bear hunting effort ince 1997 only. This is because prior to 1997, brown bear hunting in Unit 15 was conducted through a general hunt. The general hunt provisions did not require hunters to report their hunting effort. Harvested brown bear were required to be sealed.

In 1997, a State registration hunt was implemented in Unit 15. Hunter success rates are one measure of hunting opportunity. **Table 7** shows that hunter success rates ranged from a high of 12% in 1997 to a low of 4% in 2004. In 2007, a State drawing permit hunt was implemented in Unit 15. The number of applications for a drawing permit is another measure of hunting opportunity. **Table 8** shows the percentage of applicants who were awarded a drawing permit has been less than 2% annually.

Concurrently in 2007, a Federal registration permit was implemented in Unit 15C, and **Table 9** shows the hunter success rates. In the three years since implementation the number of permits issued has increased from 3 in 2007 to 16 in 2009, and hunters success rates have varied from 0% in 1997 to 50% in 2008, based on permits that were used.

It should be noted again that during some years, seasons were limited or closed because the ADF&G quota of brown bear was reached (see **Table 3**). The quota represents the number of brown bear that can safely be taken in one year and still provide for future uses. Brown bear also were taken in defense of life and property (DLP), in collisions with motorized vehicles, and through hunting. **Table 10** includes brown bears harvested through hunting only.

Table 10 shows that 1997–2009, 47 permits have been issued to residents of Ninilchik to hunt brown bear in Unit 15, and 25 hunters reported harvesting 2 brown bear. In Unit 15A, one hunter reported harvesting no brown bear; in Unit 15B, 3 hunters reported harvesting no brown bear; and in Unit 15C, 19 hunters reported harvesting 2 brown bear. Both brown bear harvests in Unit 15 were reported in Unit 15C in the Kasilof River drainage.

Table 5. Unit 8 brown bear harvest success rates for all hunters (Federally qualified, non-Federally qualified, and nonresidents of the state) using State registration and drawing permits (FWS 2011).

Unit 8 Brown Bear						
State Registration Permits				State Drawing Permits[a]		
Regulatory Year	Number of Hunters	Number of Brown Bear Harvested	Percentage of Hunters that were Successful	Number of Hunters	Number of Brown Bear Harvested	Percentage of Hunters that were Successful
2009	154	20	13%	350	181	52%
2008	187	33	18%	329	219	67%
2007	149	19	13%	341	165	48%
2006	168	20	12%	309	182	59%
2005	181	13	7%	319	195	61%
2004	166	12	7%	310	157	51%
2003	113	16	14%	303	147	49%
2002	75	14	19%	276	124	45%
2001	162	17	10%	278	140	50%
2000	0	0	0%	287	130	45%
1999	4	0	0%	321	149	46%
1998	3	0	0%	307	130	42%
1997	119	6	5%	342	158	46%
1996	100	12	12%	325	150	46%
1995	95	9	9%	326	142	44%
1994	98	5	5%	324	147	45%
1993	230	90	39%	192	73	38%
1992	285	112	39%	186	67	36%
1991	259	97	37%	193	57	30%
1990	217	94	43%	194	55	28%
1989	213	28	13%	205	18	9%
1988	214	95	44%	205	75	37%
1987	47	30	64%	75	18	24%
1986	275	31	11%	45	14	31%

[a] The number of applications received for drawing permits was not available.

Table 6. Ninilchik's Unit 8 brown bear harvest (FWS 2011).

Ninilchik Unit 8 Brown Bear			
Regulatory Year	**Permit**	**Hunt**	**Harvest**
2009	1	1	
2008			
2007	2	2	1
2006	1	1	
2005			
2004	4		
2003	1	1	
2002			
2001			
2000			
1999	1		
1998			
1997			
1996			
1995	1		
1994			
1993			
1992			
1991			
1990	2	2	2
1989			
1988	3	2	1
1987			
1986	1		
Total	17	9	4

Black cell=0

Table 7. Unit 15 brown bear harvest success rates for all hunters (Federally qualified, non-Federally qualified, and nonresidents of the state) using State registration permits (FWS 2011).

State Registration Permits, Unit 15			
Regulatory Year	**Number of Hunters**	**Number of Brown Bear Harvested**	**Percentage of Hunters that were Succussful**
2006	No permits issued		
2005	No permits issued		
2004	81	3	4%
2003	No permits issued		
2002	No permits issued		
2001	No permits issued		
2000	71	5	7%
1999	86	9	10%
1998	No permits issued		
1997	33	4	12%

Table 8. Unit 15 brown bear State drawing permits awarded to all hunters (Federally qualified, non-Federally qualified, and nonresidents of the state) (Kamletz 2011, pers. comm.).

State Drawing Permits, Unit 15			
Hunt Number	**Number of Applications Received**	**Number of Drawing Permits Awarded**	**Percentage Drawn**
2010	1,430	22	2%
2009	1,040	22	2%
2008	1,078	18	2%
2007	1,681	13	1%

Table 9. Unit 15 brown bear success rates for Federally qualified hunters (residents of Ninilchik only) using Federal registration permits (FWS 2011).

Federal Registration Permits, Unit 15				
Regulatory Year	**Number of Issued Permits**	**Number of Hunters**	**Number of Brown Bear Harvested**	**Percentage of Hunters that were Successful**
2009	16	6	1	17%
2008	8	2	1	50%
2007	3	1	0	0%

Table 10. Ninilchik's Unit 15 brown bear harvest (FWS 2011).

Ninilchik Unit 15 Brown Bear															
Regulatory	**Unit 15A**			**Unit 15B**			**Unit 15C**			**Unit 15 Unknown**			**Unit 15 Total**		
Year	**Permit**	**Hunt**	**Harv**	**Permit**	**Hunt**	**Harv**	**Permit**	**Hunt**	**Harv**	**Permit**	**Hunt**	**Harv**	**Permit**	**Hunt**	**Harv**
State Drawing Permit and Federal Registration Permit															
2009	State drawing permit required						16	6	1				16	6	1
2008	State drawing permit required						8	1	1				8	2	1
2007	State drawing permit required						3	1					3	1	
State Registration Permit															
2006	Season closed														
2005	Season closed														
2004				1	1		5	5		2			8	6	
2003	Season closed														
2002	Season closed														
2001	Season closed														
2000							3	3		1			4	3	
1999	1	1		2	2					1	1		4	4	
1998	Season closed														
1997							3	3		1			4	3	
State General Hunt															
1996	Prior to 1997, hunters were not required to report hunting effort. Harvested brown bears were														
1995	required to be sealed. See **Table 11** for sealing information.														
Total	1	1	0	3	3	0	38	19	2	2	0	0	47	25	2

Blank cell=0

=seasons closed or restricted

Table 11 shows the number of brown bears harvested by residents of Ninilchik prior to 1997. As mentioned above, in 1997 a State registration permit hunt was established in Unit 15 requiring hunters to report their hunting effort as well as harvest. Prior to 1997, brown bear harvests were recorded when harvested brown bears were sealed. **Table 11** shows that 1975–1996, residents of Ninilchik harvested 11 brown bear. Of the 6 brown bear taken in "defense of life and property" (DLP) most were taken during an open hunting season, and the other 5 brown bear were taken while being hunted.

Ninilchik residents have hunted brown bear in other management units. **Table 12** shows the number of brown bears sealed in any management unit since 1962, cumulative. Most (39%) were harvested in Unit 15, then Unit 8 (11%), and Units 9, 13, and 16 (7% each).

Additional Information

Documentation exists describing bear hunting by Ninilchik residents. The letter from Grassim Oskolkoff (1992), above, indicates spears were used. This is consistent with other early ethnographic accounts about the Dena'ina and the Alutiiq, which also noted that in addition to spears, snares, deadfalls, and taking of bear in a den, and dogs to smell out the den were used (Osgood 1966: 32–33, Mishler 2001). Additionally, a successful harvest resulted in a feast in which part of the meat was shared with others (Osgood 1966: 32–33). In Tikhmenev (1978), there is evidence that bears were trapped. The photograph from Leman (1993:416) indicates guns were/are used to harvest bears.

Table 11. Ninilchik's Unit 15 sealed brown bear up to 1996 when a State registration permit hunt was established (FWS 2011).

Ninilchik, Sealed Brown Bear			
Regulatory Year	**Unit 15A**	**Unit 15B**	**Unit 15C**
1996			1
1995			1
1994			2
1993			1
1992			
1991			
1990			
1989			1
1988			
1987			
1986			1
1985			1
1984			
1983			
1982			
1981			
1980			
1979			
1978			1
1977			1
1976			
1975			1
Total			11

Blank cell=0

At the winter 2007 Southcentral Alaska Subsistence Regional Advisory Council meeting, a Council member made the following comments related to harvests of black bear and brown bear on the Kenai Peninsula:

> I have lived in the Kenai for about 60 years, we used to think nothing of shooting a brown bear or a black bear and, of course, you know, in the last 20 years they've literally taken the brown bear hunt away from people. And although right now I think last year's take of black bear was something like 450 or 420-something in 15 and 7, if they were to take that away like they did the brown bear, all of a sudden we would have no bear hunts. And so that's the part I'm kind of thinking about. And that's where the Federal priority would come in, you'd still have a chance to get a black bear . . . . And personal history, back in the early '50s, any black bear that I ever took was usually up behind Tustumena Lake, up on the bench where the blueberries were. I was sheep hunting and we'd take a black bear for camp meat. In more recent years I have not taken a black

Table 12. Ninilchik's statewide brown bear harvest (FWS 2011).

Ninilchik 1986-2009 Cumulative						
Management Unit	**Permits**		**Hunters**		**Brown Bear Harvests**	
Unit 1	4	5%	2	5%	0	0%
Unit 4	4	5%	3	7%	1	13%
Unit 5	1	1%	0	0%	0	0%
Unit 7	1	1%	1	2%	0	0%
Unit 8	17	22%	9	22%	4	50%
Unit 10	1	1%	1	2%	1	13%
Unit 15	47	59%	25	61%	2	25%
Unit 24	1	1%	0	0%	0	0%
Unknown	2	3%	0	0%	0	0%
Total	78		41		8	

> bear. I have never sealed a black bear. So that's just personal history. The black bear that I have seen shot in the lower Kenai, in 15C, normally are shot above timberline in the Caribou Hills, it's a berry crop (SCRAC 2007: 475).

The current subsistence harvest of brown bear and the history of brown bear harvest detailed above indicates this use and the knowledge of this use has been passed from the earliest days of the settlement of Ninilchik to the present.

Like all rural communities, Ninilchik residents rely on a wide diversity of fish and wildlife resources. Ninilchik relies on a wide variety of subsistence foods affected by several factors such as abundance, weather, regulations and competition. The Alaska Department of Fish and Game, Division of Subsistence data collected in 1999 regarding 1998 Ninilchik harvests indicated the community used 86 different fish, wildlife, and plant species for subsistence. In 1998, Ninilchik residents harvested 164 pounds per person of wild resources for home use (Fall et al. 2000:245). Ninilchik residents harvested more wild resources, by pounds usable weight, than were harvested by residents of other rural communities in the area, such as, Hope (111 pounds per person) and Cooper Landing (92 pounds per person) (Fall et al. 2000:242). In 1998, the Ninilchik subsistence harvest was dominated by large land mammals, with a harvest of 70,474 pounds. A large amount of fish was harvested including 45,460 pounds of salmon and 34,100 pounds of halibut. The third highest use category was 11,837 pounds of marine invertebrates. The average number of wild resources used by Ninilchik households was 8.6 in 1998. This is consistent with uses of other communities on the road system in the area such as Cooper Landing (8.3) and Hope (9.1), but is greater than in Kenai in 1991 (6.1) and 1993 (7.1). These uses are reflective of a heterogeneous community that is comprised of long-term residents and newcomers and a community that does not harvest marine mammals.

Brown bear is not the most widely used subsistence resource in Ninilchik, however, it is part of the diversified repertoire of subsistence resources harvested in this community.

Effects of the Proposal

If this proposal is adopted, Ninilchik residents would have their customary and traditional uses of brown bear recognized in Units 15A and 15B on the Kenai Peninsula and in the Kodiak Area, in Unit 8. Conservation concerns are addressed through implementation of seasons and harvest limits and are not part of the consideration in making customary and traditional use determinations.

OSM PRELIMINARY CONCLUSION

Support Proposal WP12-22a.

Justification

Customary and traditional uses of brown bear by residents of Ninilchik exemplify the eight factors used by the Federal Subsistence Management Program to describe customary and traditional uses. The Federal Subsistence Board acknowledged this when it recognized Ninilchik's customary and traditional uses of brown bear in 2007 and adopted hunting seasons and harvest limits for brown bear in Unit 15C.

Ninilchik's pattern of brown bear use in Units 15A and 15B has been affected by interruptions beyond the control of the community, including:

- in 1967 the harvest limit was reduced from one brown bear per year to one brown bear every four years (**Table 3**);
- in 1967 the hunting season was reduced from 10 months to much shorter fall and spring seasons (**Table 3**);
- in 1978 the State's new subsistence law recognized most of Unit 15 as a nonrural area in which subsistence regulations could not be promulgated; and
- in 1995 the quota of allowable brown bear deaths was reached and the fall hunting season was closed, the first of many closures occuring from 1995 to 2006 (see **Table 10**).

Due to interruptions by factors beyond its control, including restrictive hunting seasons and harvest limits, Ninilchik's brown bear pattern of use is not clear. This is demonstrated in **Table 10**. From 1995 to 2006, hunting seasons every year but one, 2004, have either closed early or permits were not distributed, effectively closing the hunting season.

Additionally, since the new Federal hunt in Unit 15C was implemented, the Alaska Board of Game has effectively removed Ninilchik's opportunity to hunt brown bear in Units 15A and 15B by implementing State drawing permit hunts in Unit 15. These hunts have an award rate of 2% or less. Over 1,000 people apply for drawing permits annually (**Table 8**). The Federal hunt occurs on Federal public lands in Unit 15C, an area that is about 29% of Unit 15C. Recognizing Ninilchik's customary and traditional brown bear uses in other units would allow Ninilchik to hunt in Unit 15A, which is 67% Federal public lands, and Unit 15B, which is 88% Federal public lands.

According to subsistence use area maps described in the analysis (NTC 2006), Ninilchik residents have harvested moose and other resources in a wide area surrounding the community including Unit 15A and 15B. Consequently, the Federal Subsistence Board has recognized customary and traditional uses of resources such as moose, black bear, and fish in Units 15A and 15B as well as Unit 15C, the unit in which

the Ninilchik is located. Ninilchik residents have harvested brown bear in many management units of the state (**Table 12**), but it is requesting that the Board recognize its customary and traditional brown bear uses in Units 8 and 15 only. Ninilchik brown bear hunters have harvested more brown bear in Units 8 and 15 than in other management units.

Ninilchik residents have described harvesting brown bear on hunting trips targeting moose. Brown bear have been harvested as camp food, to eat while on extended camping trips to hunt, trap, and fish. Brown bear harvests parallel the harvest of other resources and occur when other resources are procured, in a wide area around the community including Units 15A and 15B.

Kodiak Island is also indicated as an area where a wide variety of resources have been harvested in the lifetime of long-time Ninilchik residents (NTC 2006). Kinship bonds continue to exist with Kodiak area families, and the Kodiak area is easily reached by boat-owning commercial fishers from Ninilchik. Kodiak Island is relatively close to the Kenai Peninsula in contrast to other areas of Alaska.

In conclusion, Ninilchik's brown bear pattern of use is not clear due to interruptions by factors beyond its control, including restrictive hunting seasons and harvest limits. It has been shown that other resources have been customarily and traditionally used in Units 15A and 15B. These resources have been harvested alongside the harvest of brown bear. Additionally, the opportunity for Ninilchik residents to hunt brown bear in their historical use areas under State regulations has diminished. Therefore, the Federal Subsistence Management Program supports the proposal to include Ninilchik in a customary and traditional brown bear use determination in Units 15A and 15B. Additionally, the customary and traditional brown bear uses of Ninilchik should be recognized in Unit 8 with which Ninilchik has kinship ties, is relatively close to Ninilchik, and is indicated in the historical use of Ninilchik for brown bear and other resources that are hunted in parallel to brown bear by Ninilchik residents.

LITERATURE CITED

ADCCEDa. 2011. 2010 Census Demographic Profiles Research and Analysis Section. http://live.laborstats.alaska.gov/cen/dparea.cfm, accessed May 18, 2011.

ADCCEDb. 2011. Alaska Community Database Community Information Summaries. http://www.commerce.state.ak.us/dca/commdb/CIS.cfm, accessed May 18, 2011.

Arndt, K. 1993. Released to reside forever in the colonies: founding of a Russian-American Company retirement settlement at Ninilchik, Alaska. Paper presented at symposium, "The Anthropology of Cook Inlet" at the 20th annual Alaska Anthropological Association meeting, April 10, 1993, in Anchorage, AK.

Blossom, D. 2007. Southcentral Alaska Subsistence Regional Advisory Committee member. Personal communication: by phone. Anchorage, AK.

De Laguna, F. 1934. The archaeology of Cook Inlet, Alaska. University of Pennsylvania Press. Philadelphia. 264 pages.

Elliot, H.W. 1887. Our Arctic Province, Alaska and the Seal Islands. Charles Scribners Sons, New York. 473 pages.

Fall, J., V. Vanek, L. Brown, G. Jennings, R. J. Wolfe and C. Utermohle. 2000. Wild resource harvests and uses by residents of selected communities of the Kenai Peninsula Borough. ADF&G, Div. of Subsistence Tech. Paper No. 253. Juneau, AK. 261 pages.

Fall, J., R. Stanek, B. Davis, L. Williams, and R. Walker. 2004. Cook Inlet customary and traditional subsistence fisheries assessment. ADF&G Division of Subsistence, Technical Paper No. 285. Juneau, AK. 245 pages.

Fedorova, S. G. 1973. The Russian population in Alaska and California: Late 18th century—1867. Materials for the study of Alaska history 4. Limestone Press. Kingston, Ontario.

Fedorova, S.G. 1975. Ethnic processes in Russian America. A. Shalkop, trans. Occasional Paper No. 1. Anchorage Historical and Fine Arts Museum.

FSB. 1995. Transcript of Federal Subsistence Board proceedings, April 12, 1995. Office of Subsistence Management, FWS. Anchorage, AK.

FSB. 1996. Transcript of Federal Subsistence Board proceeding. May 3, 1996. Volume V. Office of Subsistence Management. FWS. Anchorage, AK.

FSB. 2006. Transcripts of Federal Subsistence Board proceedings. November 16 and 17, 2006. Volumes I and II. Office of Subsistence Management, FWS. Anchorage, AK.

FSB. 2007. Transcripts of Federal Subsistence Board proceedings. April 30 to May 2, 2007. Office of Subsistence Management, FWS. Anchorage, AK.

FWS. 1996. Federal Subsistence Board book April 29–May 3, 1996. Office of Subsistence Management, FWS. Anchorage, AK. 784 pages.

FWS. 2007. Staff analysis WP07-17a. Pages 195–209 *in* Federal Subsistence Board Meeting materials April 30–May 2, 2007. Office of Subsistence Management, FWS. Anchorge, AK.

FWS. 2011. Federal subsistence permit system. On file, Office of Subsistence Management, FWS. Anchorage, AK.

Kamletz, K. 2011. Analyst/Programmer. Personal communication: email. ADF&G, Information Management. Anchorage, AK.

Leman, W., editor. 1993. Agrafena's children: the old families of Ninilchik, Alaska. Agrafena Press, Lulu Press. Ninilchik, AK. (Available at http://www.lulu.com/ninilchik)

Miller, S. 1990. Population management of bears in North America. Int. Conf. Bear Res. and Manage. 8:357–373.

Mishler, Craig. 2001. Black ducks and salmon vellies. An ethnography of Old Harbor and Ouzinkie. Report prepared for U.S. Minerals Management Service, Coop. # 14-35-0001-30788. ADF&G Division of Subsistence. Juneau, AK.

Ninilchik Parent-Teacher Organization. Circa 1951. Homesteaders handbook. Ninilchik, AK.

NTC (Ninilchik Traditional Council). 1999. Ninilchik subsistence survey 1999. On file, Nanilchik Traditional Council. Ninilchik, AK.

NTC (Ninilchik Traditional Council). 2006. ANCSA survey results, 1994 vs 1999. An attachment to Fisheries Request for Reconsideration 06-08 submitted to the Federal Subsistence Board by the Ninilchik Traditional Council, May 30, 2005. On file, Office of Subsistence Management, FWS. Anchorage, AK.

Oskolkoff, G. 1992. Letter to Curtis McVee, Chair of Federal Subsistence Board, from G. Oskolkoff, member Ninilchik Tribe. On file, Office of Subsistence Management, FWS. Anchorage, AK.

Osgood, C. 1966. The Ethnography of the Tanaina. Yale University Publications in Anthropology No. 16.: Human Relations Area Files Press. Reprinted from the 1937 Edition. 229 pages.

Porter, R. 1893. Report on population and resources of Alaska at the eleventh census: 1890. Government Printing Office, Washington DC.

Reed, C. 1985. The role of wild resource use in communities of the central Kenai Peninsula and Kachemak Bay, Alaska. ADF&G, Div. of Subsistence Tech. Paper No. 106. Juneau, AK. 201 pages.

SCRAC, 2007. Transcripts of Southcentral Alaska Subsistence Regional Advisory Council proceedings, March 16, 2007, in Anchorage, AK. Office of Subsistence Management, FWS, Anchorage, AK.

Selinger, J. 2011. Wildlife biologist. Personal communication: by phone. ADF&G, Division of Wildlife Conservation. Soldotna, AK.

Stanek, R. 1980. Subsistence Fishery Permit Survey. Cook Inlet 1980. ADF&G, Div. of Subsistence Tech. Paper No. 30. Juneau, AK. 21 pages.

Tikhmenev, P. A. 1978 [1861–1863]. A History of the Russian-American Company. University of Washington Press. Seattle and London.

Wolfe, R. 2006a. Mapping use areas of the Ninilchik community: methodological considerations. Unpublished paper submitted to the Office of Subsistence Management, FWS, on June 28, 2006, on behalf of the Ninilchik Traditional Council concerning Fisheries Requests for Reconsideration 06-02, 03, and 08. On file, Office of Subsistence Management FWS. Anchorage, AK. 6 pages

Wolfe, R. 2006b. Affidavit of Robert J. Wolfe presented at the Southcentral Federal Subsistence Regional Advisory Council meeting, August 24, 2006. Anchorage, AK.

APPENDIX A

At the inception of the Federal Subsistence Management Program in Alaska in 1990, the majority of the Kenai Peninsula was in the Kenai Peninsula nonrural area established by the State. The State did not allow subsistence uses in nonrural areas.

At the conclusion of its rural/nonrural determination process, the Federal Subsistence Management Program deemed that large portions of the Kenai Peninsula were rural and many Kenai Peninsula communities went from a nonrural status to a rural status and were newly eligible to fish, hunt, and trap under Federal subsistence regulations (56 FR 238; January 3, 1991).

When the customary and traditional use determinations were adopted from State regulations in 1992 (72 FR 22959; May 29, 1992), in Unit 15 all rural residents of the state were eligible to hunt and fish under Federal subsistence regulations for many species of fish and wildlife. For some species, the Federal Subsistence Board adopted a no Federal subsistence priority ("no subsistence"). The use of the no Federal subsistence priority determination had the effect of avoiding conflicts between Federally qualified and non-Federally qualified users of these resources.

Subsequently, the Federal Subsistence Board implemented a systematic program for review of customary and traditional use determinations:

> As a priority consideration, the Board will focus its determinations on community or area uses of large mammals (ungulates and bears). Nevertheless, the Board recognizes that subsistence is in large part exemplified by reliance upon, and traditional use of, a multitude of fish and wildlife species, and consequently even the Board's initial large mammal assessments will examine information on subsistence uses of varied species. Furthermore, the Board retains the authority to initiate assessments and make eligibility determinations related to the customary and traditional use of any species as recommended by Regional Councils or as necessary for proper administration of the program. The Board will examine uses of species of large mammals by communities or areas rather than focus on individual herds (59 FR 36063–36064; July 15, 1994)

However, in 1995, based on the recommendation of regional council chairs, the Board revised its process for making customary and traditional use determinations. The Board would "entertain proposals to revise the customary and traditional use dominations at the same time as it accepts proposals for changes to the seasons and harvest limits" (60 FR 40460; August 9, 1995).

WP12-22b Executive Summary	
General Description	Proposal WP12-22b requests the brown bear harvest season dates in Unit 15C be revised and that a season be established for brown bear in Units 15A and 15B. *Submitted by the Ninilchik Traditional Council*
Proposed Regulation	**Unit 15—Brown Bear** *~~Units 15C—~~1bear every four regulatory years by Federal registration permit. The season may be ~~opened or~~ closed by announcement of the Kenai National Wildlife Refuge manager in consultation with ADG&G and the chair of the Southcentral Alaska Subsistence Regional Advisory Council.* — *Oct. 1 – Nov. 30* ***~~Season to be announced~~*** ; *Apr. 1 – June 15* ***~~Season to be announced~~***
OSM Preliminary Conclusion	**Support** Proposal WP12-22b **with modification** to maintain the season announcement, align the state and federal season dates, and maintain the authority of the Kenai National Wildlife Refuge manager to open and close the season in Unit 15 – remainder (Units 15A and 15B), based on conservation concerns. **Unit 15A—Brown Bear** *1 bear every four regulatory years by Federal registration permit. The season may be opened or closed by announcement of the Kenai National Wildlife Refuge manager in consultation with ADG&G and the chair of the Southcentral Alaska Subsistence Regional Advisory Council.* — ***Sept. 15*** *~~Oct. 1~~ – Nov. 30 Season to be announced* ; *Apr. 1 – June 15 Season to be announced* **Unit 15B—Brown Bear** *1 bear every four regulatory years by Federal registration permit. The season may be opened or closed by announcement of the Kenai National Wildlife Refuge manager in consultation with ADF&G and the chair of the Southcentral Alaska Subsistence Regional Advisory Council.* — ***Sept. 15*** *~~Oct. 1~~ – Nov. 30 Season to be announced* ; *Apr. 1 – June 15 Season to be announced*

continued on next page

WP12-22b Executive Summary *(continued)*	
OSM Preliminary Conclusion (Continued)	**Unit 15C—Brown Bear** *1 bear every four regulatory years by Federal registration permit. The season may be opened or closed by announcement of the Kenai National Wildlife Refuge manager in consultation with ADF&G and the chair of the Southcentral Alaska Subsistence Regional Advisory Council.* — ***Sept. 15*** *~~Oct. 1~~ – Nov. 30 Season to be announced* *Apr. 1 – June 15 Season to be announced*
Southcentral Regional Council Recommendation	
Kodiak/Aleutians Regional Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP12-22b

ISSUES

Proposal WP12-22b, submitted by the Ninilchik Traditional Council, requests the brown bear harvest season dates in Unit 15C be revised and that a season be established for brown bear in Units 15A and 15B.

DISCUSSION

Currently there is no Federal brown bear season in Units 15A or 15B, and the proponent requests the brown bear season for all of Unit 15C be expanded and established in all of Unit 15. The brown bear seasons for Unit 15C is opened by announcement of the Kenai National Wildlife Refuge manager in consultation with ADF&G and the chair of the Southcentral Alaska Subsistence Regional Advisory Council. The seasons are Oct 1 – Nov 30 and Apr 1 – June 15. The proponent requests seasons be established for Units 15A and 15B which align with the changes requested for Unit 15C. A companion proposal WP12-22a, requests a positive customary and traditional use determination of brown bear in Unit 8, Unit 15A, and Unit 15B for residents of Ninilchik.

Existing Federal Regulations

Unit 15—Brown Bear

Units 15C—1bear every four regulatory years by Federal registration permit. The season may be opened or closed by announcement of the Kenai National Wildlife Refuge manager in consultation with ADF&G and the chair of the Southcentral Alaska Subsistence Regional Advisory Council.	*Oct. 1 – Nov. 30 Season to be announced* *Apr. 1 – June 15 Season to be announced*
Unit 15 remainder	*No Federal open season*

Proposed Federal Regulations

Unit 15—Brown Bear

~~Units 15C—~~1bear every four regulatory years by Federal registration permit. The season may be ~~opened or~~ closed by announcement of the Kenai National Wildlife Refuge manager in consultation with ADG&G and the chair of the Southcentral Alaska Subsistence Regional Advisory Council.	*Oct. 1 – Nov. 30 ~~**Season to be announced**~~* *Apr. 1 – June 15 ~~**Season to be announced**~~*

Existing State Regulation

Unit 15—Brown bear

Unit 15 residents and nonresidents — One bear every 4 regulatory years by permit.	*Sept. 15 – Nov. 30* *Apr. 1 – June 15*

Extent of Federal Public Lands

In Unit 15, 52% of the lands are managed by the Kenai National Wildlife Refuge. Less than 1% of the unit lies within Kenai Fjords National Park, which are closed to subsistence uses (see **Unit 15** map)**.**

Customary and Traditional Use Determinations

Residents of Ninilchik have a positive and customary use determination for brown bear in Unit 15C. There is no Federal subsistence priority for Unit 15 remainder (See Staff Analysis WP12-22a).

Regulatory History

Brown bears in Alaska were first given game status in 1902 (Miller 1990) with liberal seasons and bag limits. By 1959, the harvest limit had been reduced to a single bear during a 10 month season (**Table 1**). In 1984, representatives of ADF&G, USFWS, and USFS formed an Interagency Brown Bear Study Team (IBBST) to discuss brown bear management and research needs on the Kenai Peninsula (Bevins et al. 1984). In 1990, the NPS joined that effort. Federal subsistence regulations enacted for the 1990 season did not allow hunting in Unit 15 (**Table 2**). More restrictive general hunting regulations were enacted by the State in 1989, reducing the fall season by 14 days to limit incidental take by moose hunters. In 1994, the Alaska Board of Game changed the fall season to October 1–25 in response to continued high harvests. In 1997, a registration permit general hunt system was implemented by the State, and the season was shortened and changed to October 15–31. Due to high levels of non-hunting human-caused mortality, the 1995–1998 fall seasons, and the 1999 spring season were closed by ADF&G emergency order. The major causes of known non-hunter brown bear deaths were from vehicle collisions; in defense of property at residences; in defense of life by recreationists; and mistaken identity while hunting other game. Any additional general harvest would have exceeded management objectives. Kenai Peninsula brown bears were listed as a 'Population of Special Concern' under Alaska's list of 'Species of Special Concern' in 1998. The Federal Subsistence Board adopted regulations in 2007 that reduced the season and take in Unit 15C.

Management Direction

The current ADF&G management objectives for Unit 15 are to maintain a healthy brown bear population and minimize negative brown bear/human interactions. Human-caused mortalities are not to exceed 10 reproductive age females (5-year old bears or those showing evidence of producing cubs) per calendar year, (Selinger 2006). Hunting for brown bear under State and Federal regulations is allowed only if the number of non-hunter human-caused brown bear deaths is below the maximum allowable mortality identified in management objectives.

Biological Background

Brown bears have the lowest reproductive rate of any land mammal in North America and cannot sustain high mortality pressures (Demarais and Krausman 2000). First parturition usually occurs after a female

Table 1. Selected State brown bear general hunting regulations in Unit 15, 1959–present.

Regulatory year	Area	Season	Harvest limit
1959–1966	Kenai Peninsula	Sept.–June	1 brown bear
1967–1977	Kenai Peninsula	**Fall season only**	**1 brown bear every four regulatory years**
1978–1996	**Unit 15**	Fall season[a] **Spring season**	1 brown bear every four regulatory years
1997–2005[b]	Unit 15	Fall season Spring season[a]	1 brown bear every four regulatory years **by State registration permit**
2006[b]	Unit 15	Fall season (Oct. 15–Oct. 31)	1 brown bear every four regulatory years by State registration permit **available in person in Homer, Soldotna, or Anchorage beginning Oct. 10**
2007–2008[b]	Unit 15	Fall season (Oct. 1–Nov. 30) Spring season (Apr. 1–June 15)	1 brown bear every four regulatory years by State **draw** permit.
2009–2010	Unit 15	Fall season (**Sept. 15**–Nov. 30) Spring season (Apr. 1–June 15)	1 brown bear every four regulatory years by State draw permit.

[a] Fall 1995–1998 and spring 1999 seasons closed by ADF&G emergency order. Additional seasons may have been closed by emergency order
[b] No permits issued 2002–2007.

reaches 5 years of age, average litter of 2 cubs, and breeding intervals between litters may be 3 to 4 years (Aune et al. 1994).

In 1995, ADF&G and the IBBST initiated a research project to evaluate the cumulative effects model being used; assess brown bear habitat; estimate survival; and model the Kenai brown bear population (Schwartz and Arthur 1996). The IBBST investigated baseline inventories of salmon streams and other known high-use areas (Bevins et al. 1984, Risdahl et al. 1986, Schloeder et al. 1987, Jacobs et al. 1988). The IBBST also looked at brown bear dietary requirements (Jacoby et al. 1999; Hilderbrand et al. 1999a); importance of marine nitrogen (Hilderbrand 1999b); and the effects of diet on reproduction (Hilderbrand et al. 2000).

Brown bears are found throughout the remote lowland forests and intermountain valleys of the Kenai Peninsula. Field observations indicate brown bear densities are highest in the forested lowlands and subalpine areas west of the Kenai Mountains. In 1989, Jacobs (1989) provided an initial estimate of 150–250 bears on the Kenai Peninsula. With additional information, ADF&G biologists later increased that

Table 2. Federal brown bear subsistence hunting regulations in Unit 15, 1990–present.

Regulatory year	Area	Season	Harvest limit
1990–2006	Unit 15	No Federal open season	No harvest allowed
2007–2012	**Unit 15C**	**Oct. 1–Nov. 30 (Season to be announced) Apr. 1–June 15 (Season to be announced)**	**1 bear every four regulatory years by Federal registration permit. The season may be opened or closed by announcement of the Kenai National Wildlife Refuge manager in consultation with ADF&G and the chair of the Southcentral Alaska Subsistence Regional Advisory Council.**
	Unit 15 **remainder**	No Federal open season	No harvest allowed

Brown bear harvested during a Federal subsistence season must have the skull and hide salvaged, as well as all edible meat. In addition, brown bear skins and skulls must be sealed as per § __.26(j). Handicraft articles may not be sold from the skin, hide, pelt, fur, bones, teeth, sinew, claws or skulls of brown bear taken in Unit 15.

estimate of 250–300 brown bears (Del Frate 1993). Because of concern about the long term conservation of Kenai brown bear, the ADF&G designated the Kenai Peninsula brown bear population as a "Species of Special Concern" in 1998 due to the small population size, potential isolation from mainland brown bear populations, and increasing loss of habitat due to human development (Del Frate 1999). Although the Kenai Peninsula is a large geographic area (approximately 9,000 mi^2), the amount of suitable habitat on the Peninsula has been reduced by approximately 70% due to the cumulative effects of human activities (Suring et al. 1998). Increasing land development and human activity which results in non-hunting mortality of brown bear on the Kenai Peninsula has generated concern about potential impacts to the population since 1998.

Studies of the Kenai brown bear population have continued because of concern that the population may be at risk due to the cumulative impacts of hunting harvest; genetic isolation; illegal killing; defense of life or property; loss of habitat from development and logging; and displacement of bears from salmon streams by recreational fishing (Farley 2005). Also female brown bear immigration to the Kenai Peninsula is believed to be low (Jackson 2003) which makes the population more susceptible to declines from catastrophic events or stochastic variation in vital rates (Hanski and Gilpin 1991). Suring et al. (2006) found that female brown bears on the Kenai Peninsula heavily use areas within 2 km of salmon spawning areas which is predominately where roads, residences, and recreation sites have been constructed because of human demand for access to salmon streams. Minimizing the potential of bears being killed in defense of life and property would require proactive management of development within the Kenai Peninsula. In 2010, the Kenai National Wildlife Refuge and Chugach National Forest managers identified landscape-scale movement corridors for wildlife along the Sterling Highway west of Cooper Landing to help mitigate conflicts between humans and wildlife and maintain connectivity between the northern and southern portions of the Kenai Peninsula (Morton et al. 2010).

Although the IBBST has not been active in the past few years, ADF&G biologists are continuing their efforts to determine the population parameters (e.g. birth and death rates) influencing the Kenai Peninsula brown bear population. Additional data is also being gathered and analyzed to determine the genetic

health of the brown bear population on the peninsula (Farley 2010). The current study effort is to continue through the 2012 field season with results available following conclusion of the study.

In 2010, Kenai NWR and Chugach NF conducted a DNA-based mark recapture study in an effort to determine a statistically reliable estimation of the brown bear population on the Refuge and Forest. These data are currently being analyzed and a population estimate is not expected until 2012.

Harvest History

Annual sustainable harvests of brown bears on the Kenai Peninsula are related to reproductive output and natural mortality rates. Hunting opportunities are dependent on levels of non-hunting mortality prior to October 15. Non-hunter mortality taken from ADF&G sealing records database includes defense of life and property (DLP), research kills, illegally harvested, natural mortality, vehicle collisions, and agency kills. The average non-hunting mortality in Unit 15 from 2006–2010 has been 21 brown bears/year, with an average of 5 bears/per year harvested via hunting 2008–2010 (**Table 3**). The predominant non-hunting mortality (52%) occurs in Unit 15A (**Figure 1**) and as a consequence, no State and Federal brown bear harvest permits were issued in Unit 15 until 2007 (FWS 2011). Since 2007, Anchorage has been the predominate community being issued permits to harvest brown bear within Unit 15A (**Figure 2**).

Table 3. Federal and State brown bear mortality in Unit 15. FWS 2011.

	Unit 15A		Unit 15B		Unit 15C		TOTAL Mortality
	Hunter	Non-hunter**	Hunter	Non-hunter**	Hunter	Non-hunter**	
2006		8		2		2	12
2007		16		2		6	24
2008		11		9	1	7	28
2009	4	16		1	1	3	25
2010		7	3	4	2	7	23

** Non-hunter mortality taken from ADF&G sealing records database includes DLP, research kills, illegally harvested, natural mortality, vehicle collisions, and agency kills

Currently there is no Federal subsistence season for brown bear on the Kenai Peninsula for Unit 15A and Unit 15B.

Effects of the Proposal

If this proposal is adopted, it would provide for a brown bear season in Units 15A and 15B, eliminate the requirement for announcing the season in Unit 15C, and not require announcing the season in either Unit 15A or 15B. Future hunting opportunities will likely continue to be severely restricted because of high levels of non-hunting human-caused mortality; the isolation of the Kenai Peninsula brown bear population from mainland populations; and increasing human development. Establishing a Federal season within Unit 15 remainder (Units 15A and B) would give a meaningful subsistence opportunity for residents of Ninilchik (provided WP12-22a is adopted) by issuing a Federal permit rather than Federally qualified users applying for a limited number of state permits. Most state permits for these units are currently being issued to Alaska residents living outside of Unit 15. Federal subsistence hunters would be required to report brown bears harvested under Federal regulations through registration permit reports, and managers already have the ability to close the seasons to keep the take within sustainable limits.

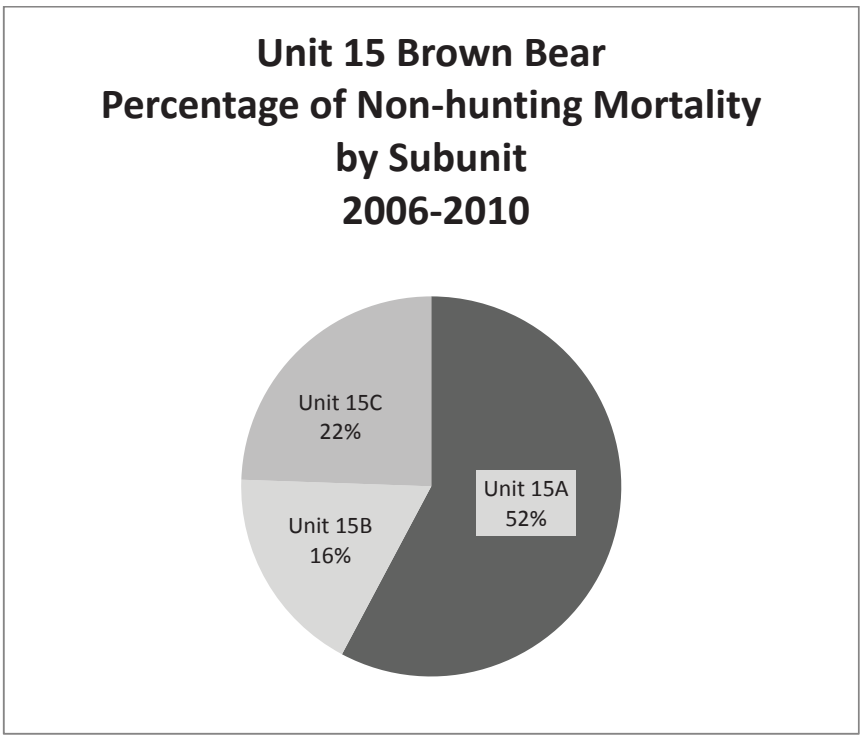


Figure 1. Percentage of non-hunting mortality for brown bear by Subunit in Unit 15. FWS 2011.

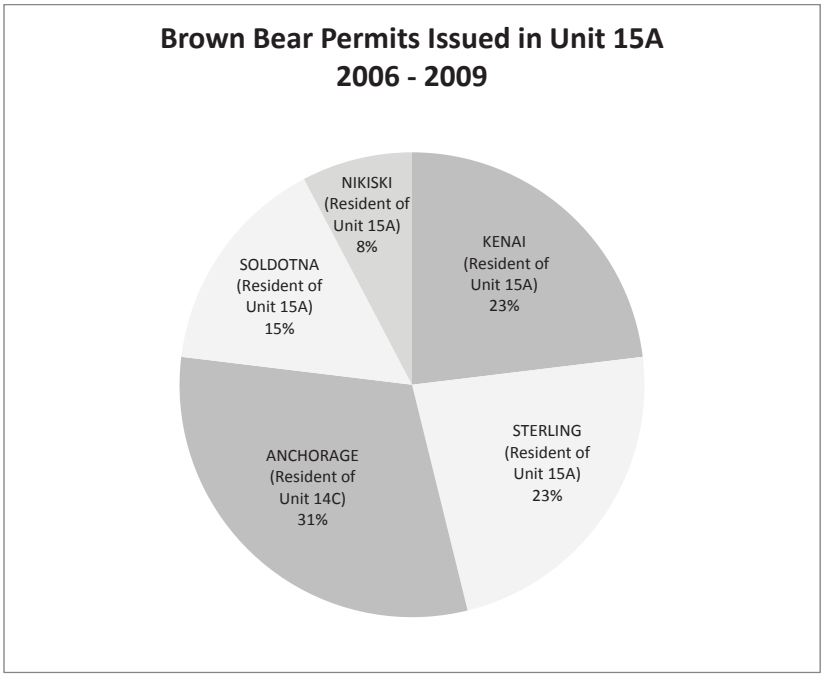


Figure 2. Percentage of permits issued for brown bear in Unit 15A from 2006–2009. FWS 2011.

OSM PRELIMINARY CONCLUSION

Support Proposal WP12-22b **with modification** to maintain the season announcement, align the state and federal season dates, and maintain the authority of the Kenai National Wildlife Refuge manager to open and close the season in Unit 15 – remainder (Units 15A and 15B), based on conservation concerns.

The modified regulation would read:

Unit 15A—Brown Bear	
1 bear every four regulatory years by Federal registration permit. The season may be opened or closed by announcement of the Kenai National Wildlife Refuge manager in consultation with ADG&G and the chair of the Southcentral Alaska Subsistence Regional Advisory Council.	***Sept. 15*** *~~Oct. 1~~ – Nov. 30 Season to be announced* *Apr. 1 – June 15 Season to be announced*
Unit 15B—Brown Bear	
1 bear every four regulatory years by Federal registration permit. The season may be opened or closed by announcement of the Kenai National Wildlife Refuge manager in consultation with ADF&G and the chair of the Southcentral Alaska Subsistence Regional Advisory Council.	***Sept. 15*** *~~Oct. 1~~ – Nov. 30 Season to be announced* *Apr. 1 – June 15 Season to be announced*
Unit 15C—Brown Bear	
1 bear every four regulatory years by Federal registration permit. The season may be opened or closed by announcement of the Kenai National Wildlife Refuge manager in consultation with ADF&G and the chair of the Southcentral Alaska Subsistence Regional Advisory Council.	***Sept. 15*** *~~Oct. 1~~ – Nov. 30 Season to be announced* *Apr. 1 – June 15 Season to be announced*

Justification

Population modeling has been used to calculate sustainable harvest levels that include non-hunting human causes of mortality. Due to high levels of non-hunting human-caused mortality, legal harvesting of brown bears has been limited in recent years. The primary subunit with non-hunting mortality is Unit 15A and residents living outside Unit 15 have been issued State permits to harvest a brown bear within Unit 15A. Currently there is not a Federal brown bear season in 15A and if permits are issued, Federally qualified subsistence users should have the priority to harvest a brown bear on Kenai Peninsula on Federal public lands prior to issuing to non-Federally qualified users.

Wildlife managers have very little control over the number of brown bear killed due to defense of life and property and other non-hunting mortality. To assure the continued viability of the Kenai Peninsula brown bear population, hunting, including Federal subsistence opportunities should be provided only after other

human-caused mortality is assessed. Aligning the state and federal seasons and maintaining the ability of the Federal manager to announce the season within Units 15, where there is a predominance of non-hunting mortality, would give biologists and managers the opportunity to determine whether a harvestable surplus exists before authorizing the opening of a Federal subsistence hunting season.

LITERATURE CITED

ADF&G, Division of Wildlife Conservation. 2000. Kenai Peninsula brown bear conservation strategy. 84 pages.

Aune, K.E., R.D. Mace, and D.W. Carney. 1994. The reproductive biology of female grizzly bears in the Northern Continental Divide ecosystem with supplemental data from the Yellowstone ecosystem. International Conference on Bear Research and Management 9:451–458.

Bevins, J., C. Schwartz, E. Bangs, and K. Nelson. 1984. Kenai Peninsula brown bear studies: report of the interagency brown bear study team. 103 pages.

Del Frate, G. 1993. Units 7 and 15 brown bear management report. Pages 49–57 *in* S. Abbott, editor. Brown bear management report of survey-inventory activities, 1 July 1990–30 June, 1992. ADF&G Federal Aid in Wildlife Restoration Project W-23-4 and W-23-5. Study 4.0. Juneau, AK.

Del Frate, G. 1999. Units 7 and 15 brown bear management report. Pages 55–65 *in* S. Abbott, editor. Brown bear management report of survey-inventory activities, 1 July 1996–30 June, 1998. ADF&G. Federal Aid in Wildlife Restoration Project. W-23-4 and W-23-5. Study 4.0. Juneau, AK.

Demarais, S. and P.R. Krausman. 2000. Ecology and Management of Large Mammals in North America. Prentice Hall. Upper Saddle River, NJ. 777 pages.

Farley, S. 2005. Ecological studies of the Kenai Peninsula brown bear. Federal aid in wildlife restoration research report of survey-inventory activities, 1 July 2004– 30 June 2005. ADF&G. Fed. Aid in Wildl. Rest. Proj. Final Rep. ADF&G. Juneau, AK. 11 pages.

FWS 2011. Federal Subsistence Database. May 20, 2011.

Graves, T.A., S. Farley, and C. Servheen. 2006. Frequency and Distribution of Highway Crossings by Kenai Peninsula Brown Bears. Wildlife Society Bulletin,34:800–808.

Hanski, I., and M. Gilpin. 1991. Metapopulation dynamics: brief history and conceptual domain. Biological Journal of the Linnean Society 42:3–16.

Hilderbrand, G., S. Jenkins, C. Schwartz, T. Hanely, and C. Robinson. 1999a. Effect of seasonal differences in dietary meat intake on changes in body mass and composition in wild and captive brown bears. Can. J. Zool. 77:1623–1630.

Hilderbrand, G. T. Hanely, C. Robbins, and C. Schwartz. 1999b. Role of brown bears (Ursus arctos) in the flow of marine nitrogen into a terrestrial ecosystem. Oecologia 121:546–550.

Hilderbrand, G., C. Schwartz, C. Robbins, and T. Hanley. 2000. Effect of hibernation and reproductive status on body mass and condition of coastal brown bears. J. Wildl. Manage. 64:178–183.

Jacobs, M. 1989. An initial population analysis and management strategy of Kenai Peninsula brown bears. M.S. Thesis. Univ. of West Virginia. Morgantown. 205 pages.

Jacobs, M., W. Staples, N. Weiland, E. Bangs, and C. Schwartz. 1988. Kenai Peninsula brown bear studies: report of the Interagency brown bear study team, 1987. ADF&G. 17 pages.

Jacoby, M., Hilderbrand, C. Servheen, C. Schwartz, S. Arthur, T. Hanley, C. Robbins, and R. Michner. 1999. Trophic relations of brown and black bears in several western North American ecosystems. J. Wildl. Manage. 63:921–929.

Jackson, J. V. 2003. The conservation genetics of the brown bear (*Ursus arctos*) of the Kenai Peninsula, south central Alaska. Thesis, Alaska Pacific University, Anchorage, USA.

Miller, S. 1990. Population management of bears in North America. Int. Conf. Bear Res. and Manage. 8:357–373.

Morton, J., D. Magness, M. Benoit., M. Bray. 2010. Delineation of Landscape Linkages in the Cooper Landing Planning Area. Cooper Landing Advisory Planning Commission Document. Cooper Landing, AK. 11 pages.

Risdahl, G. C. Schloeder, E. Bangs, and C. Schwartz. 1986. Kenai Peninsula brown bear studies, report of the Interagency Brown Bear Study Team, 1986. 92 pages.

Selinger, J. 2005. Units 7 and 15 brown bear management report. Pages 63–73 in C. Brown, ed. Brown bear management report of survey-inventory activities, 1 July 2002–30 June 2004. ADF&G. Fed. Aid in Wildl. Rest. Proj. W-33-1 and W-33-5. Study 4.0. Juneau, AK. 326 pages.

Selinger, J. 2006. Wildlife Biologist. Personal communication. ADF&G.

Schloeder, C. M. Jacobs, N. Weiland, E. Bangs, and C. Schwartz. 1987. Kenai Peninsula brown bear studies, report of the Interagency Brown Bear Study Team, 1986. 52 pages.

Schwartz, C. and S. Arthur. 1996. Cumulative effects model verification, sustained yield estimation, and population viability management of the Kenai Peninsula, Alaska brown bear. Federal aid in wildlife restoration research report of survey-inventory activities, 1 July 1994–30 June 1996. ADF&G. Fed. Aid in Wildl. Rest. Proj. Grant W-24-3, W-24-4, Study 4.27. Juneau, AK. 9 pages.

Suring, L., K. Barber, C. Schwarts, T. Bailey, W. Shuster, M. Tetreau. 1998. Analysis of cumulative effects on brown bears on the Kenai Peninsula, Southcentral Alaska. Int. Conf. Bear Res. and Manage. 10:107–117.

Suring, L.H., S.D. Farley, G.V. Hilderbrand, M.I. Goldstein, S. Howlin, and W.P., Erickson. 2006. Patterns of Landscape Use by Female Brown Bears on the Kenai Peninsula, Alaska. The Journal of Wildlife Management, 70:1580–1587.

WP12-23/24 Executive Summary	
General Description	Proposal WP12-23 requests a season be established for caribou in Unit 11, within Wrangell-St. Elias National Park and Preserve, from October 21 – March 31 by Federal registration permit. *Submitted by Vicki Penwell* Proposal WP12-24 requests a season be established for one bull caribou from Aug. 1 – Sept. 30 in Unit 11 by Federal registration permit within Wrangell-St. Elias National Park and Preserve. *Submitted by Cheesh' Na Tribal Council*
Proposed Regulation	Proposal WP12-23 *Unit 11 —* ***That portion within the Wrangell-St. Elias National Park and Preserve that is bounded by the Copper Lake Trail to the east, Nabesna Road to the north and the Copper River to the south and west to the Suslota Trail trailhead and the Suslota Trail to the east, the park and preserve boundary to the north and west ending at the boundary between Units 11 and 13.*** — ~~*No Federal open season*~~ ***Oct. 21 – March 31*** ***1 bull caribou per household by Federal Registration permit only with a limit of 25 permits issued.*** *Unit 11 — Remainder* — *No Federal open season* Proposal WP12-24 *Unit 11 —* ***1 bull caribou by Federal registration permit only.**** — ***Aug. 1 – Sept. 30*** ***Quotas and any needed closures will be announced by the Federal in-season manager after consultation with ADF&G.***
OSM Preliminary Conclusion	**Oppose** Proposal WP12-23 and WP12-24
Southcentral Regional Council Recommendation	
Eastern Interior Regional Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	See comments following the analysis.
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP12-23 AND WP 12-24

ISSUES

Proposal WP12-23, submitted by Vicki Penwell, requests a season be established for caribou in Unit 11, within Wrangell-St. Elias National Park and Preserve, from October 21 – March 31 by Federal registration permit.

Proposal WP12-24, submitted by Cheesh' Na Tribal Council, requests a season be established for one bull caribou from Aug. 1– Sept. 30 in Unit 11 by Federal registration permit within Wrangell-St. Elias National Park and Preserve.

DISCUSSION

Proposal WP12-23

The proposal requests a season be established in a portion of Unit 11 to allow the harvest of one bull caribou per household by Federal Registration Permit from October 21 – March 31 with a limit of 25 permits issued. The proponent states the Mentasta caribou herd co-mingles with the Nelchina caribou herd within the requested hunt area and they believe that most of the harvest would be from the Nelchina herd. The proponent states that while there is an opportunity to harvest caribou in other nearby locations, they are not traditional harvest locations and the expense in cash and time continue to place a burden on people with a heavy reliance on wild foods.

Proposal WP12-24

The proponent requests a season to be open from August 1 – Sept. 30 for one bull caribou by Federal registration permit. Any quotas and closures will be announced by the Federal in-season manager after consultation with Alaska Department of Fish and Game. The proponent states that there is a small harvestable surplus available within this herd and that Federal subsistence users should be able to harvest it.

There has been no open season for the Mentasta caribou herd since 1992, other than a small ANILCA, Title VIII, §804 harvest from 1996–1998 due to management objectives as stated in the Mentasta Caribou Herd Cooperative Management Plan not being met for calf production and recruitment (NPS 1995).

Existing Federal Regulation

Unit 11	*No Federal open season*

Proposed Federal Regulation

Proposal WP12-23

Unit 11 — ***That portion within the Wrangell-St. Elias National Park and Preserve that is bounded by the Copper Lake Trail to the east, Nabesna Road to the north and the Copper River to the south and west to the Suslota Trail trailhead and the Suslota Trail to the east, the park and preserve boundary to the north and west ending at the boundary between Units 11 and 13.***	~~*No Federal open season*~~ ***Oct. 21 – March 31***
1 bull caribou per household by Federal Registration permit only with a limit of 25 permits issued.	
Unit 11 — Remainder	*No Federal open season*

Proposal WP12-24

Unit 11 — ***1 bull caribou by Federal registration permit only.****	***Aug. 1 – Sept. 30***
Quotas and any needed closures will be announced by the Federal in-season manager after consultation with ADF&G.	

Existing State Regulation

Unit 11	*No State open season*

Extent of Federal Public Lands

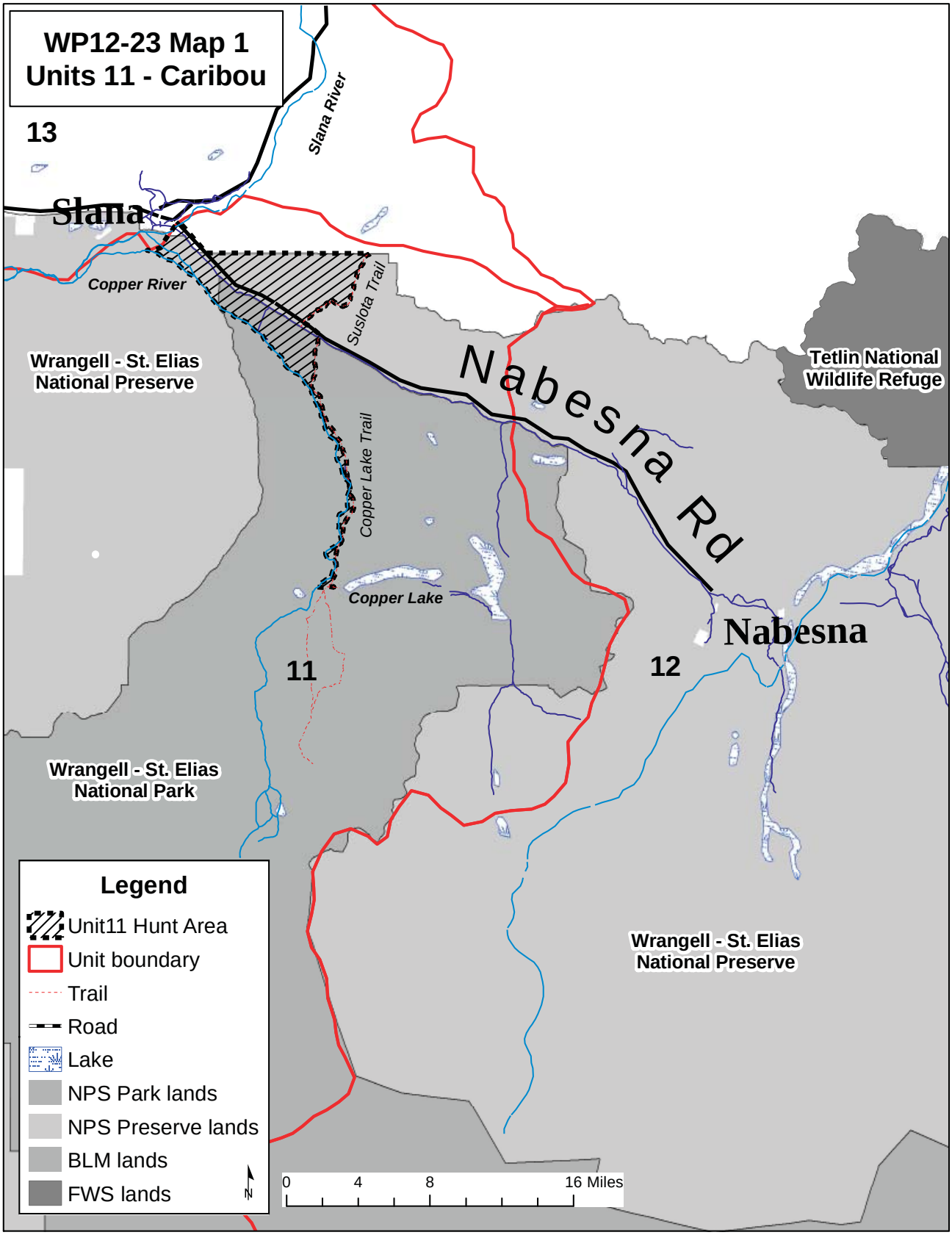
Federal public lands comprise approximately 81% of Unit 11 and within those consist of 97% National Park Service (NPS), 3% U.S. Forest Service (USFS) and <0.1% Bureau of Land Management (BLM) lands (**Map 1**).

Special Requirements for Park Service Lands

Under the guidelines of ANILCA, National Park Service regulations identify qualified local rural subsistence users in National Parks and Monuments by: 1) identifying resident zone communities which include a significant concentration of people who have customarily and traditionally used subsistence resources on park lands; and 2) identifying and issuing subsistence use (13.440) permits to individuals residing outside of the resident zone communities who have a personal or family history of subsistence use.

Customary and Traditional Use Determinations

In Unit 11 north of the Sanford River, rural residents of Units 11, 12, 13A, 13B, 13C, 13D, Healy Lake, Chickaloon and Dot Lake have a positive and customary use determination for caribou. In Unit 11 remainder, rural residents of Units 11, 13A, 13B, 13C, 13D, and Chickaloon have a positive and customary use determination for caribou.


WP12-23 Map 1
Units 11 - Caribou
13
Slana
Slana River
Copper River
Suslota Trail
Wrangell - St. Elias
National Preserve
Nabesna Rd
Tetlin National
Wildlife Refuge
Copper Lake Trail
Copper Lake
Nabesna
11
12
Wrangell - St. Elias
National Park
Wrangell - St. Elias
National Preserve
Legend
Unit11 Hunt Area
Unit boundary
Trail
Road
Lake
NPS Park lands
NPS Preserve lands
BLM lands
FWS lands
N
0
4
8
16 Miles

Regulatory History

In 1993, Proposal 93-94 was adopted by the Federal Subsistence Board (Board) to close Federal public lands to caribou hunting in Unit 11. The combination of low caribou numbers and low recruitment were direct indicators of a continuing conservation concern which warranted protection of this small caribou population. Under ANILCA Section 815(3), restricting the taking of fish and wildlife on Federal public lands can be authorized if necessary for the conservation of healthy populations.

In 1996, the National Park Service (NPS) proposed (Proposal 17) establishing a limited caribou hunt (15-bull quota) based on the objectives of the "Mentasta Caribou Herd Cooperative Management Plan (1995)," which was signed by Wrangell-St. Elias NPS, the Alaska Department of Fish and Game, and Tetlin National Wildlife Refuge. The cooperative plan was also endorsed by both the Southcentral and Eastern Interior Subsistence Regional Advisory Councils. The management objectives in the cooperative plan were based on productivity and not the population size. Therefore the cooperative plan called for establishing a limited hunt despite a declining population due to increased productivity. In 1996, the Board adopted Proposal 17 with modification to reopen the caribou season only to residents of Chitina, Chistochina, Copper Center, Gakona, Gulkana, Mentasta, and Tazlina with a quota of 15 bulls. In 1998, Proposal 23 was adopted by the Board to close all caribou hunting within Unit 11 because calf recruitment was below management objectives stated in the Mentasta Caribou Herd Cooperative Management Plan (1995). The Alaska Department of Fish and Game supported the closure because the State season for Mentasta caribou in this area had been closed for several years.

Management Direction

The Mentasta Caribou Herd Management Plan (1995) states "an annual fall harvest quota will be established between 15 and 20 percent of the previous 2-year mean calf recruitment as long as such recruitment is at least 80 calves. In addition, at population levels below 2,000 the harvest limit will be limited to "bulls only" and will be closed if the 2-year mean bull:cow ratio drops below 35 bulls:100 cows".

In addition, the plan states "winter hunts for the Nelchina and Forty-mile caribou herds, may result in incidental harvest of Mentasta caribou and should be managed to minimize the effect on the Mentasta population. When quotas are below 30, permits will be allocated among these Federal subsistence users in accordance with a priority system based on: 1) customary and direct dependence upon the resources as the mainstay of one's livelihood; 2) local residency; and 3) availability of alternative resources (ANILCA, Sec. 804)".

The Cheesh'Na Tribal Council does not consider the Mentasta caribou a separate herd from the Nelchina herd (SCRAC 2011). Wilson Justin, the legal representative of the Cheesh'Na Tribal Council stated at the Southcentral Regional Advisory Council that,

> "there never was a Mentasta herd. There's only two caribou around, the big medicine people's bull caribou, sometimes called the Glacier Caribou and then the Nelchina Herd…We never considered them as Mentasta or Chisana Herd, they were always just portions of the Nelchina Herd that didn't move out…So I object to the terminology, it's not Mentasta Caribou, it's nothing more than Nelchina Caribou and they have come there sometimes staying over through the winter into the summer in large numbers, sometime in small numbers, depending directly on predation, hunting pressure or in many cases the food source. So this number of 3,000 down to 400 is erroneous, it should not be used for managing that game. The Cheesh'Na does not believe that the game management unit boundaries under any conditions should ever be used to determine

community harvest and access of those resources that are directly related to that community under all conditions."

Biological Background

Management of caribou herds in Alaska has been based on the site fidelity of caribou cows to discrete calving grounds (Skoog 1968, Hemming 1971, Gunn and Miller 1986) and aggregating together for at least a major portion of the year (Miller 1982). Cows that calve together typically also remain together during the rut which suggests that caribou with a herd are breeding together. Population dynamics of caribou are defined by geographic units rather than one large interbreeding population which requires that individual herds be managed separately (Hinkes et al. 2005). There are conflicting views on the role of animal exchange between caribou herds or between calving grounds and its effect on altering demographics (Bergerud 2000). Changes in caribou abundance may be due to changes in distribution and go undetected due to limitations of census efforts (Bergerud 2000). Adjacent herds seldom have concurrent censuses which make it difficult to identify the major shifts of caribou movement between herds. However, major shifts in calving ground use to that of another herd are presumed to be minimal (Gunn and Miller 1986, Valkenburg et al. 2002).

The Mentasta caribou herd is the primary herd within Unit 11 and calves and summers within the upper Copper River Basin, and northern and western flanks of the Wrangell Mountains (Putera 2011). Barten et al. (2002) found that parturient female caribou from the Mentasta herd used birth sites that lowered the risk of predation and traded-off forage abundance for increased safety. Minimizing risk of predation of neonates may result in ungulates selecting habitats that compromise their ability to optimize foraging (Bowyer et al. 1999, Barten et al. 2001). Female Mentasta herd caribou used sites at higher elevations with sub-optimal forage, presumably to avoid predators, and when <10 day old neonates were lost, females descended from the higher elevations to join other nonparturient females. In addition, females with neonates >10 days old also descended to join the larger group of females which coincides with moving out of the riskiest period of predation on ungulate neonates (Adams et al. 1995).

Population surveys conducted between 1987 and 1991 revealed continued declines in both total numbers and calf:cow ratios, more specifically, results from a 1991 survey revealed a critically low calf:cow ratio of 3 calves:100 cows (FWS 1992). These results may have been due to a total reproductive failure within the MCH for that year and may be due to sub-optimal nutrition for caribou cows. Poor forage quality in the summer can cause cow caribou to skip a breeding season to regain body condition due to being nutritionally stressed. The resulting decrease in body condition in female caribou can have a negative effect on productivity by causing lower weight gain or survival in calves (Crete and Huot 1993, Dale 2000).

From the 1987 fall population estimate of 3,160 animals, the herd steadily declined to the 2010 fall estimate of 336 caribou (Putera 2011, pers. comm.) (**Table 1**). The 1993–2005 population estimates ranged from 970 to 261 animals (post-closure trend) and population estimates that have been adjusted for sightability probabilities show an average of 350 caribou since 2008 (range 319–421) (Putera 2010, pers. comm.). Results from June post-calving and fall post-rut surveys for the period revealed critically low calf production and survival. Fall surveys conducted between 1987 and 2009 revealed severe declines in total observed cows from 2,065 to 79, respectively (Putera 2010, pers. comm.).

Fall surveys conducted within the same 23-year period also revealed severe declines in total observed Mentasta bulls from 847 observed in 1987 to 68 bulls observed in the fall 2009 survey (**Table 1**). Although observed fall bull:cow ratios appear high, the number of cows observed is small and the bull component likely includes a significant number of Nelchina bulls. The number of Mentasta bulls per 100

Table 1. Results from 1987–2010 population surveys of the Mentasta Caribou Herd, Unit 11 (Putera 2011, pers. comm.).

Year	June Calves:100 Cows	Fall Cows	Fall Calves	Fall Bulls	Fall Calves:100 Cows	Fall Bulls:100 Cows[7]	Fall Population Estimate[1]
1987	18	2065	248	847	12	41	3160
1988	34	1540	277	662	18	43	2480
1989	31	1615	727	258	16	45	2600
1990	-	-	-	-	-	-	-
1991	3	1347	27	566	2	42	1940
1992	16	973	58	399	6	41	1430
1993	9	683	27	260	4	38	970
1994	19	591	65	224	11	38	880
1995	26	541	119	189	22	35	850
1996	16	534	59	187	11[2]	35[2]	780
1997	15	432	23	159	5	40	610
1998	13	350	35	150	10	42	540
1999	13	230	22	177	10	77	430
2000	1	297	0	175	0	59	470
2001	11	228	12	150	5	66	586[5]
2002	21	190	55	86	29	45	410[5]
2003	17	223	38	101	16	46	522[5]
2004	8	-	-	-	5[3]	-	293[4]
2005	23	113	17	78	15	69	261
2006	-	-	-	-	-	-	-
2007	23	93	27	72	29	77	280
2008	14	89	18	65	20	73	319[6]
2009	12	79	8	68	10	86	421[6]
2010	25	88	22	106	25	120	336[6]

[1] September population estimates are based on # of cows at time of postcalving count and fall calf/bull/cow ratios

[2] 1996 fall composition count was not conducted because of early mixing with Nelchina herd. Fall calf/cow was estimated from postcalving calf/cow ratio and survival radiocollared cows (.70; 30 June –30 September). Fall bull/cow ratio is assumed to be the same as 1995.

[3] 2004 fall comp count was not conducted due to budget. Fall calf/cow was estimated from post-calving calf:cow ratio and average (1987–2003) calf survivorship (0.63)

[4] 2004 population estimate is based on extrapolation from June census, adjusted for average calf survivorship and average bull ratios.

[5] September population estimates are adjusted based on sightability probabilities.

[6] September population estimates are adjusted based on sightability probabilities and assuming a ratio of 30 bulls:100 cows within Mentasta herd to adjust for mixing of Nelchina bulls.

[7] Observed high bull:cow ratios likely due to presence of Nelchina bulls.

cows has been difficult to determine during fall composition counts due to the presence of Nelchina bulls within the Mentasta herd range in September. Given the years of low Mentasta herd recruitment, recent population estimates for the herd are calculated using a ratio of 30 bulls per 100 cows. While Nelchina bulls have wintered within the range of the Mentasta herd (Putera 2011), the range of the Nelchina herd has varied widely due to burns and their effect on lichen availability within their traditional area (Collins et al 2011). Thus, there is limited ability to predict the extent or frequency of mixing between Nelchina and Mentasta bulls and impossible to discern whether the harvest of a bull would be from the Nelchina or Mentasta herd. Higher numbers of adult bulls in the population are important as it helps maintain synchrony in parturition. Holand et al. (2003) showed skewed sex ratio and increased young male age structure of reindeer could result in fewer adult females conceiving during the first estrous cycle due to their hesitation to mate with young bulls. Maintaining synchrony in parturition also provides increased survival chances for calves since parturition is typically timed with the start of plant growth (Bergerud 2000). Late-born offspring have been shown to have lower body mass than caribou offspring produced earlier in the season (Holand et al. 2003) which can lead to lower juvenile survival rates due to density dependent factors of winter food limitation (Skogland 1985) and deep snows (Bergerud 2000).

The Mentasta caribou herd is considered a sedentary and low density ecotype (Bergerud 1996 Hinkes et al. 2005) versus a migratory and high density ecotype, such as the Nelchina herd, and thus more susceptible to extreme random events. The term ecotype designates populations of the same species that evolved different demographic and behavioral adaptations to cope with specific ecological constraints. A key factor in distinguishing between the two ecotypes is whether animals were dispersed or aggregated when young were born (Seip 1991, Bergerud 2000). The chronic low calf productivity and recruitment for the Mentasta caribou could make random environmental events a primary driver for a more severe population decline (Tews et al. 2006). Increased winter mortality due to icing events may result in malnutrition and starvation for more susceptible calves and bulls with depleted energy reserves following the rut (Dau 2004, Miller and Gunn 2003). Bull caribou die at a higher rate than cows due to greater energy demands during early winter rutting activities which greatly reduce their body reserves (Russell et al. 1993, Miller and Gunn 2003).

Harvest History

Both annual reported harvest and success rates reflected overall declines between 1977 and 1989. The total harvest reported between 1977 and 1989 was 1,294 caribou. Annual harvest ranged from 149 animals harvested in 1977 to 45 animals in 1989 (ADF&G 1993). The average annual harvest for the 13-year period was 100 caribou (ADF&G 1993). Harvest success rates decreased from 43% in 1977 to 19% in 1989. There has been no reported harvest from the Mentasta Caribou herd since 1998 as there has been no State or Federal season.

Current Events Involving Species

Two similar proposals (WP10-102 and 103) were submitted to the Federal Subsistence Board for consideration in 2010. The Eastern Interior and Southcentral Regional Advisory Councils (EIRAC and SCRAC) recommended rejection of both proposals during their winter 2010 meetings. Both the EIRAC and SCRAC unanimously opposed the proposals based on conservation concerns for both the NCH and the MCH (EIRAC 2010, SCRAC 2010). Additionally, the TNWR Manager said “the depressed MCH cannot support additional harvest” (Booth 2009. Pers. Comm.),The Wrangell-St. Elias National Park Subsistence Resource Commission recommended rejection, as did the Office of Subsistence Management in its recommendation to the Federal Subsistence Board. Proposal WP10-102 requested that harvest limit be raised from one caribou to two caribou in Unit 12 remainder. Proposal WP10-103 requested the season

opening date be put into regulation and start on October 21st. Ultimately, the proposals were placed on the consent agenda with a recommendation of reject and the Federal Subsistence Board concurred. The June 2009 Nelchina caribou herd census showed approximately 33,000 caribou (ADFG 2009a), a little below the State's management objective of 35,000–40,000 caribou. During the EIRAC 2010 winter meeting TNWR, staff reported that Mentasta Caribou had been observed within the boundaries of the TNWR during their fall surveys. Wrangell St. Elias National Park and Preserve staff reported the MCH herd was approximately 450 animals and could not sustain a hunt (EIRAC 2010, Putera 2010). The most recent census of the MCH was conducted in 2010 and resulted in a population estimate of 336 animals. This census also noted that the cow component of the population was critically low and calf production was below management objectives in the Mentasta Caribou Herd Management Plan (Putera 2011). While the MCH is present on the refuge during the winter caribou hunt, it is unknown how many Mentasta Caribou are mixing with the NCH (EIRAC 2010).

Effects of the Proposals

If either WP12-23 or WP12-24 is adopted, it would allow a harvest on a population that has chronically low productivity which would have detrimental effects on the caribou herd and ultimately subsistence users, by driving the population of the herd to the point where recovery is more difficult. The additional harvest is unlikely to have any biological effect on the NCH. However, impacts to the MCH are a conservation concern and deters from the principles in the MCH management plan. While it is known that the MCH migrates with the Nelchina herd, it is not known with certainty how many Mentasta caribou mix with the NCH.

OSM PRELIMINARY CONCLUSION

Oppose Proposal WP12-23 and WP12-24

Justification

The Mentasta Caribou herd as currently defined exists in low numbers and their occupation of summer and winter ranges results in small groups distributed as a fragmented population. Because of this, total numbers and composition can be significantly affected by sightability when searching for small groups of caribou over vast terrain. Mixing of the Nelchina and Mentasta caribou bulls makes interpreting fall composition surveys difficult and there is limited ability to predict the extent, timing or frequency of mixing between the two herds and it would be impossible to discern whether the bull was from the Mentasta herd or the Nelchina herd. The possibility of increased winter mortality due to icing events may result in malnutrition and starvation for more susceptible bulls with depleted energy reserves following the rut furthering the decline of the Mentasta caribou population. In addition, calf production and survival remain critically low and have resulted in low numbers of adult cows and bulls observed during the fall population surveys. Calf production and recruitment in particular remains below the management objective of a running two-year mean fall calf recruitment greater than 80 calves, as stated in the "Mentasta Caribou Herd Cooperative Management Plan (1995)." These declines are indicative of low production, poor recruitment, and low survival rates among cohorts within the population.

Federal public lands within Unit 11 should remain closed to caribou hunting for the conservation of a healthy population (Section 815(3)).

LITERATURE CITED

Adams, L.G., F.J. Singer, B.W. Dale. 1995. Caribou Calf Mortality in Denali National Park, Alaska. Journal of Wildlife Management 59:584–594.

ADF&G 1993. Annual Performance Report of Surveys-Inventory Activities, 1 July 1992–30 June 1993 Caribou. November 1993. Division of Wildlife Conservation, Alaska Department of Fish and Game. Juneau, AK. Pages 6–7.

Barten, N.L., R.T. Bowyer, K.J. Jenkins. 2001. Habitat Use by Female Caribou: Tradeoffs Associated with Parturition. Journal of Wildlife Management 65:77–92.

Bergerud, A.T. 2000. Caribou. Pages 658–693 *in* S. Demarais and P.R. Krausman, editors. Ecology and Management of Large Mammals in North America. Prentice Hall Press. Upper saddle River, NJ. 778 pages.

Bergerud, A.T. 1996. Evolving perspectives on caribou population dynamics, have we got it right yet? Rangifer 9:95–115.

Bowyer, R.T., V. Van Ballenberghe, J.G. Kie, and J.A.K. Maier. 1999. Birth-site selection in Alaskan moose: maternal strategies for coping with a risky environment. Journal of Mammalogy 80: 1070–1083.

Collins, W.B., B.W. Dale, L.G. Adams, D.E. McElwain, K.Joly. 2011. Fire, Grazing History, Lichen Abundance, and Winter Distribution of Caribou in Alaska's Taiga. Journal of Wildlife Management 75:369–377.

Crete, M. and J. Huot. 1993. Regulation of a large herd of caribou: Summer nutrition affects calf growth and body reserves of dams. Canadian Journal of Zoology 71:2291–2296.

Dale, B.W. 2000. The Influence of Seasonal Spatial Distribution on Growth and Age of First Reproduction of Nelchina Caribou with Comparisons to the Mentasta Herd. Research Performance Report. 1 July 1999 – 30 June 2000. Federal Aid Annual Performance Report Grant W-27-3, Study 3.44. Anchorage, AK.

Dau, J., 2004. Two caribou mortality events in Northwest Alaska: possible causes and management implications. Rangifer, Special Issue 16:37–50.

EIRAC. 2010. Transcripts of the Eastern Interior Subsistence Regional Advisory Council proceedings, February 25. 2010 in Fairbanks, Alaska. Office of Subsistence Management, FWS. Anchorage, AK, pages 287–288.

FWS 1992. Federal Subsistence Board Book, Region 2. Proposal 92–18. Office of Subsistence Management, Fish and Wildlife Service. Anchorage, AK. Pages 94–95.

Gunn, A., and F.L. Miller. 1986. Traditional behavior and fidelity to caribou calving grounds by barren-ground caribou. Rangifer 1:151–158.

Haber, G.C., and C.J. Walters. 1980. Dynamics of the Alaska-Yukon caribou herds and management implications. Pages 645–663 *in* E. Reimers, E. Gaare, and S. Skjenneberg, editors. Proceeding of the Second International Reindeer Caribou Symposium, Trondheim, Norway.

Hemming, J.P. 1971. The Distribution and Movement Patterns of Caribou in Alaska. Alaska Department of Fish and Game. Federal Technical Bulletin 1:1–60.

Hinkes, M.T., G.H. Collins, L.J. Van Daele, S.D. Kovach, A.R. Aderman, J.D. Woolington, R.J Seavoy. 2005. Influence of Population Growth on Caribou Herd Identity, Calving Ground Fidelity, and Behavior. Journal of Wildlife Management 69(3):1147–1162.

Holand, O., K.H. Roed, A. Mysterud, J. Kumpula, M. Nieminen, and M. E. Smith. 2003. The effect of sex ratio and male age structure on reindeer calving. Journal of Wildlife Management 67:25–33.

Miller, F. L. 1982. Management of barren-ground caribou (*Rangifer tarandus groenlandicus*) in Canada. Pages 523–534 in C.M. Wemmer, editor. Biology and management of the cervidae. Smithsonian Institution Press, Washington, D.C., USA.

Miller, F.L. and A. Gunn. 2003. Catastrophic Die-off of Peary Caribou on the Western Queen Elizabeth Islands, Canadian High Arctic. Arctic 56:381–390.

NPS 1995. Final Mentasta Caribou Herd Cooperative Management Plan. June 1995. Wrangell-St. Elias National Park and Preserve. Glennallen, AK. 17 Pp.

Putera, J. 2010. Wildlife Biologist. Personal communication: written. Wrangell-St. Elias National Park and Preserve. Glennallen, AK.

Putera, J. 2011. Wildlife Biologist. Personal communication: verbal. Wrangell-St. Elias National Park and Preserve. Glennallen, AK.

Putera, J. 2011. Wildlife Biologist. Personal communication: written. Wrangell-St. Elias National Park and Preserve. Glennallen, AK.

Russell, D.E., A.M. Martell, and W.A.C. Nixon. 1993. Range ecology of the porcupine caribou herd in Canada. Rangifer Special Issue 8:1– 167.

Seip, D.R. 1991. Predation and caribou populations. Rangifer 7:46–72.

Skogland, T. 1985. The effects of density-dependent resource limitations on the demography of wild reindeer. Journal of Animal Ecology 54:359–374.

Skoog, R. 1968. Ecology of the caribou in Alaska. Dissertation, University of California, Berkeley, USA.

Tews, J., M.A.D. Ferguson, L. Fahrig. 2006. Potential net effects of climate change on High Arctic Peary caribou: Lessons from a spatially explicit simulation model. Ecological Modelling 207:85–98.

Tobey B. and R. Kelleyhouse. 2007. Units 13 and 14B caribou management report. Pages 83–99 *in* P. Harper, editor. Caribou management report of survey and inventory activities 1 July 2004–30 June 2006. Alaska Department of Fish and Game. Juneau, Alaska.

Alaska Department of Fish and Game
Comments to Regional Advisory Council

Wildlife Proposals WP12-24, 65, 66, and Deferred WP10-104: Chisana Caribou

This group of proposals request different variations of allowing limited harvest of caribou from the Chisana herd.

WP12-24: Requests approval of a federal subsistence bull caribou hunt in an identified portion of Unit 11 and Unit 12 remainder targeting the Chisana herd. The proposal also recommends permitting, quotas, and closures be established by the Federal inseason manager following consultation with ADF&G.

WP12-65: Requests in Unit 12 – that portion of the Nabesna River drainage within the Wrangell-St. Elias National Park and Preserve and all Federal public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border–1 bull by Federal registration permit only. The proposal recommends the hunt be managed in accordance with the recommendations in the Chisana Herd Management Plan (Plan). The proposal requests closure of the hunt to non-federally qualified hunters.

Open Season – Aug. 10 – Sept 30

The Chisana caribou herd management plans sets guidelines for opening a limited hunt on the herd while protecting the herd from overharvest.

WP12-66: Requests approval of a federal subsistence caribou hunt targeting the Chisana caribou herd in that portion of Unit 12 east of the Nabesna River and the Nabesna Glacier, and south of the Winter Train running southeast from Pickerel Lake to the Canadian border – one bull by federal Registration permit. This proposal also request no federal open season in that portion of Unit 12 within the Wrangell-St. Elias national park that lies west of the Nabesna River and Nabesna Glacier. The proposal requests total closure to non-federally qualified hunters until federal subsistence user needs are identified and a quantifiably harvest amount is produced to determine if the federal subsistence priory is being met (at least three year process).

Deferred Wildlife Proposal WP10-104: Establishes a joint federal/state draw permit hunt for the Chisana caribou herd starting fall 2011, following recommendations in the draft Management Plan for the Chisana Caribou, 2010-2015, released April 22, 2010, for public review. The management plans sets guidelines for opening a limited hunt on the herd while protecting the herd from overharvest.

Introduction: In the 1980s and early 1990s, an average of 29 Chisana caribou were harvested annually with about 60% of the harvest taken by Alaska residents. Following a decline in the herd in the early 1990s, hunting in Alaska and Canada was stopped. Between 2003 and 2006 a captive rearing program was conducted by the Yukon Department of Environment which successfully increased the number of calves recruited

into the population during the recovery effort. From 2004 through 2008, the population has been stable and is estimated at 700-800 caribou.

The Chisana Caribou herd management plan, drafted by Yukon Department of Environment, White River First Nation, Canadian Wildlife Service, National Park Service (Wrangell St. Elias), US Fish and Wildlife Service and Alaska Department of Fish and Game was recently finalized.

Impact on Subsistence Users: Access to the Chisana caribou herd is difficult and is mostly limited to aircraft. Harvest by federally-qualified subsistence users in Unit 12 averaged less than 2 caribou between 1981-1983 and 1990-1993. Adoption of WP12-24, 65, or 66 may provide a few federal subsistence hunters the opportunity to harvest a bull caribou from the Chisana herd.

Opportunity Provided by State: State regulations limit caribou hunting in Unit 12 to one bull caribou west of the Glenn Hwy (Tok Cutoff) and have not provided any opportunity for harvesting Chisana caribou since 1993.

Conservation Issues: The Chisana caribou management plan recommends a 2% bulls only harvest if the herd remains increasing or stable, the bull/cow ratio does not fall below 35/100, and calf recruitment remains above 15 calves/100 cows over a three year average. It is unlikely a limited harvest would have any negative impact on the herd.

Enforcement Issues: A drawing hunt for both federally qualified and non-federally qualified users would have few enforcement issues. If the Federal Subsistence Board chooses to limit this hunt to federally qualified users, all enforcement efforts would be the responsibility of the respective land managers.

Other Comments: The guidelines set forth for a harvest in the management plan are based on the 2010 census in which the herd met the required population level, bull/cow and calf cow ratios.

Recommendation: Support portions of all four proposals with modification. We recommend following the guidelines for a limited harvest of Chisana caribou shared between Alaska and Canada as is laid out in the management plan and further recommend using a joint state/federal permit to monitor harvest in Alaska. A joint federal/state drawing permit would ensure continued cooperation between state and federal managers that work together to develop the herd management plan.

If the harvest is limited to federal subsistence users only, a registration hunt should be used and the season closed if the quota is met. Based on harvest records since the 1970s, the remote nature (aircraft access only), the likelihood of harvesting the quota is unlikely. A short reporting period should be adequate to ensure over harvest does not occur.

WP12-25 Executive Summary	
General Description	Proposal WP12-25 requests the Unit 13 caribou fall harvest season be extended an additional 9 days from Aug.10 – Sept. 30 to Aug. 1 – Sept. 30. *Submitted by the Ahtna Tene Nene' Customary and Traditional Use Committee*
Proposed Regulation	**Unit 13—Caribou** *Units 13A and 13B—2 caribou by Federal registration permit only. The sex of animals that may be taken will be announced by the Glennallen Field Office Manager of the Bureau of Land Management in consultation with the Alaska Department of Fish and Game area biologist and Chairs of the Eastern Interior Alaska Regional Advisory Council and the Southcentral Alaska Regional Advisory Council.* — ***Aug. 1***. ~~*Aug. 10*~~ – *Sept. 30* *Oct. 21–Mar. 31* *Unit 13 remainder—2 bulls by Federal registration permit only.* — ***Aug. 1*** ~~*Aug. 10*~~ – *Sept. 30* *Oct. 21–Mar. 31* *Hunting within the Trans-Alaska Oil Pipeline right-of-way is prohibited. The right-of-way is identified as the area occupied by the pipeline (buried or above ground) and the cleared area 25 feet on either side of the pipeline.*
OSM Preliminary Conclusion	**Support**
Southcentral Regional Council Recommendation	
Eastern Interior Regional Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	**Oppose**
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP12-25

ISSUES

Proposal WP12-25, submitted by the Ahtna Tene Nene' Customary and Traditional Use Committee, requests the Unit 13 caribou fall harvest season be extended an additional 9 days from Aug.10 – Sept. 30 to Aug. 1 – Sept. 30.

DISCUSSION

The proponent requests that the harvest season be extended to allow Federally qualified subsistence users an additional 9 days of hunting opportunity. The proponent states that there will be no impact on the Nelchina caribou herd (NCH) population since the State and Federal administered hunts can be closed if the annual harvest quota is reached.

Existing Federal Regulations

Unit 13—Caribou

Units 13A and 13B—2 caribou by Federal registration permit only. The sex of animals that may be taken will be announced by the Glennallen Field Office Manager of the Bureau of Land Management in consultation with the Alaska Department of Fish and Game area biologist and Chairs of the Eastern Interior Alaska Regional Advisory Council and the Southcentral Alaska Regional Advisory Council.	*Aug. 10–Sept. 30* *Oct. 21–Mar. 31*
Unit 13 remainder—2 bulls by Federal registration permit only.	*Aug. 10–Sept. 30* *Oct. 21–Mar. 31*
Hunting within the Trans-Alaska Oil Pipeline right-of-way is prohibited. The right-of-way is identified as the area occupied by the pipeline (buried or above ground) and the cleared area 25 feet on either side of the pipeline.	

Proposed Federal Regulations

Unit 13—Caribou

Units 13A and 13B—2 caribou by Federal registration permit only. The sex of animals that may be taken will be announced by the Glennallen Field Office Manager of the Bureau of Land Management in consultation with the Alaska Department of Fish and Game area biologist and Chairs of the Eastern Interior Alaska Regional Advisory Council and the Southcentral Alaska Regional Advisory Council.	***Aug. 1***. ~~*Aug. 10*~~ *– Sept. 30* *Oct. 21–Mar. 31*

Unit 13 remainder—2 bulls by Federal registration permit only.	***Aug. 1*** *~~Aug. 10~~. – Sept. 30* *Oct. 21–Mar. 31*
Hunting within the Trans-Alaska Oil Pipeline right-of-way is prohibited. The right-of-way is identified as the area occupied by the pipeline (buried or above ground) and the cleared area 25 feet on either side of the pipeline.	

Existing State Regulations

Unit 13—Caribou

One caribou by permit. Permits are only available by application.	*Aug. 10–Sept. 20* *Oct. 21–Mar. 31*
OR	
1 caribou by permit (Community)	*Aug. 10–Sept. 20* *Oct. 21–Mar. 31*
OR	
One bull by permit (Drawing)	*Aug. 20 – Sept. 20* *Oct. 21 – Mar. 31*

Extent of Federal Public Lands

Federal public lands comprise approximately 10% of Unit 13 and consist of 2% Bureau of Land Management (BLM), 6% Denali National Park and Wrangell-St. Elias National Preserve, and 2% Chugach National Forest lands (**Unit 13 map**). Within Units 13A and 13B, Federal public lands include BLM managed lands and comprise approximately 8% of Unit 13B and 1% of Unit 13A.

Special Requirements for Park Service Lands

Under the guidelines of ANILCA, National Park Service regulations identify qualified local rural subsistence users in National Parks and Monuments by: 1) identifying resident zone communities which include a significant concentration of people who have customarily and traditionally used subsistence resources on park lands; and 2) identifying and issuing subsistence use (13.440) permits to individuals residing outside of the resident zone communities who have a personal or family history of subsistence use.

Customary and Traditional Use Determinations

UNIT(S)	CUSTOMARY AND TRADITIONAL DETERMINATION FOR CARIBOU
Units 13A and 13D	Rural residents of Units 11, 12 (along the Nabesna Road), 13, and the residents of Chickaloon.
Unit 13B	Rural residents of Units 11, 12 (along the Nabesna Road), 13, residents of Unit 20D except Fort Greely, and the residents of Chickaloon.

Unit 13C	Rural residents of Units 11, 12 (along the Nabesna Road), 13, Chickaloon, Dot Lake and Healy Lake.
Unit 13E	Rural residents of Units 11, 12 (along the Nabesna Road), 13, Chickaloon, McKinley Village, and the area along the Parks Highway between mileposts 216 and 239 (except no subsistence for residents of Denali National Park headquarters).

Regulatory History

The Nelchina Caribou Herd (NCH) is an important resource for many rural and non-rural users due to its proximity to Anchorage and Fairbanks and its distribution within Units 11, 12, 13, and 20 E (Tobey 2003). A State Tier II system for NCH harvest was established in 1990 for Unit 13. A State Tier I permit was added for the 1996/97 and 1997/98 seasons to allow any Alaskan resident to harvest cows or young bulls, in order to reduce the herd to the management objective. In 1998, the Tier I hunt was closed, as the herd was brought within management objectives due to the increased harvest and lower calf recruitment. The two Federal registration hunts in Unit 13 are for residents of Units 11, 13, and residents along the Nabesna Road in Unit 12 and Delta Junction in Unit 20. Since 1998, a Federal registration hunt has been opened to residents of Unit 12, Dot Lake, Healy Lake and Mentasta between November and April when the NCH migrate through the Tetlin National Wildlife Refuge.

In 2001, the Federal Subsistence Board (Board) adopted Proposal WP01-07 which changed the harvest limit of 2 caribou to 2 bulls by Federal registration permit only for all of Unit 13.

In 2002, Proposal WP02-16 was deferred until the 2003 regulatory year when it was adopted by the Board (as WP03-14). It changed the harvest limit for Unit 13A and 13B back to 2 caribou from 2 bulls, with the harvest of bulls only during the August 10 – September 30 season. During the winter season (October 21 – March 31) the Glennallen Field Office Manager of the Bureau of Land Management was delegated the authority to determine the sex of the animals taken in consultation with the Alaska Department of Fish and Game area biologist and Chairs of the Eastern Interior Regional Advisory Council and the Southcentral Regional Advisory Council. For the remainder of Unit 13, the harvest limit remained 2 bulls for the August 10 – September 30 and October 21 – March 31 season.

In 2003, proposal WP03-14 requested that the harvest limit for caribou in Unit 13 be changed from two bulls to two caribou and that the late season be changed from Oct. 21–Mar. 30 to Dec. 1 – Apr. 20. In an effort to allow more flexibility in the harvest the Board adopted proposal WP03-14 with modification at its May 2003 meeting. The Aug. 10 –Sept. 30 season was limited to a bull only harvest, while the sex of the animals that may be taken during the winter season (Oct. 21 – Mar. 31) is to be announced by the Glennallen Field Office Manager of the BLM in consultation with the ADF&G area biologist and Chairs of the Eastern Interior Regional Advisory Council and the Southcentral Regional Advisory Council. The understanding was that if the population survey results indicate that the Nelchina herd had grown to over 35,000 animals then the winter season would be open to the harvest of any caribou.

In 2005, WP05-08 was adopted by the Board for Unit 13A and 13B to allow the sex of the harvested animals to be determined by the Glennallen Field Office Manager of the BLM in consultation with the Alaska Department of Fish and Game area biologist and Chairs of the Eastern Interior Regional Advisory Council and the Southcentral Regional Advisory Council. This was in effect for the entire season (August 10 – September 30 and October 21 – March 31), not just the winter season.

Emergency Order 02-01-07 closed the remainder of the 2006–2007 State harvest season for the Nelchina Caribou Herd on February 4, 2007 due to high State hunter success in the State Tier II hunt. Likewise, Emergency Order 02-08-07 closed the 2007–2008 Tier II State subsistence harvest (TC566) on September 20, 2007 and was scheduled to re-open on October 21, 2007. However concerns that the unreported harvest of the State and Federal subsistence hunts would put the harvest over 1000 bulls and 500 cows resulted in a closure of the remainder of the season as a precaution.

For the 2009–2010 the State Nelchina caribou Tier II subsistence hunt was eliminated. Two hunts were added: a Tier I hunt (Alaskans only) and a Community harvest hunt for residents of Gulkana, Cantwell, Chistochina, Gakona, Mentasta, Tazlina, Chitina, and Copper Center. The harvest limit for each is one caribou (sex to be announced annually) with season dates of August 10 – September 20 and October 21 – March 31 with a harvest limit of 300 caribou. All other Alaskan hunters could obtain a permit and participate in a Tier I (resident only) hunt. A Federally qualified subsistence user could opt into the community harvest system or use a State registration permit to harvest one caribou and then get a Federal permit to harvest another caribou since the Federal harvest limit is two caribou.

In July 2010, the Alaska Superior Court found that elimination of the Tier II hunt was arbitrary and unreasonable (ADF&G 2010). In response, the Board of Game met in an emergency teleconference in July 2010, and opened a Tier II hunt from October 21 – March 31, maintained the existing Tier I season, awarded up to 500 additional Tier I permits to the community subsistence harvest permit holders, and awarded additional Tier I permits to others in the original applicant pool (ADF&G 2010a).

Emergency Order 04-1-10 closed the remainder of the winter Nelchina Tier II subsistence season due to harvest reports indicating that approximately 1,404 bulls and 547 cows were harvested and unreported harvest was expected to raise the total harvest above the harvest objective (ADF&G 2010b).

Management Direction

Current ADF&G management objectives for the NCH are to: maintain a fall population of 35,000 – 40,000 caribou with a minimum of 40 bulls:100 cows and 40 calves:100 cows. In addition, the management objectives include providing the potential to harvest 3,000 – 6, 000 caribou.

Biological Background

Historically the productivity and recruitment for the NCH has been high with an average of 52 calves:100 cows (1985–1996) and is determined by June and October surveys by ADF&G. The annual harvestable surplus of Nelchina caribou is dependent on productivity and survival of calves (ADF&G 2010c). More recent (2008–2011) productivity and recruitment measures show an average of 44 calves:100 cows which is above the management goal of 40 calves:100 cows. In October 2007, sex and age composition survey estimated ratios of 35 calves:100 cows and 34 bulls:100 cows (ADF&G 2008) and the fall survey in 2008 showed 40 calves:100 cows and 39 bulls:100 cows (ADF&G 2009a). During the most recent fall survey in 2010, 65 calves:100 cows which equates to nearly 15,000 calves or 33% of the total herd (ADF&G 2010c) and 42 bulls:100 cows were observed (ADF&G 2010c).

Between 2001 and 2008, the bull:cow ratio was below the management objective of 40 bulls:100 cows with an average of 32 bulls:100 cows. The lowest ratio of 23 bulls:100 cows was in 2006–2007 (**Table 1**). From 2008 to 2010, the average bull:cow ratio increased to 38 bulls:100 cows (**Table 1**). Hunters harvested primarily bulls in Tier II, drawing, and subsistence registration hunts despite the hunt being open for either sex (**Figure 1**).

Table 1. Nelchina caribou fall composition counts and estimated herd size, regulatory years 2001 – 2010

Regulatory Year	Total bulls: 100 cows	Calves: 100	Calves (%)	Cows (%)	Total bulls (%)	Composition Sample size	Total Adults	Estimate of herd size	Postcalving[a] count
2001–2002	37	40	22	57	21	3949	26,159	33,745	35,106
2002–2003	31	48	27	56	17	1710	25,161	34,380	35,939
2003–2004	31	35	21	60	19	3140	23,786	30,141	31,114
2004–2005	31	45	26	57	17	1640	27,299	36,677	38,961
2005–2006	36	41	23	57	20	3263	28,133	36,428	36,993
2006–2007	24[b]	48[b]	25	61	14	3300	NA	N/A	N/A
2007–2008	34	35	21	59	20	3027	2395	32,569	33,744
2008–2009	39	40	22	56	22	3378	2627	N/A	N/A
2009–2010	42	29	17	58	25	3076	2553	33,835	33,146
2010–2011		65							44,954

[a] Spring census
(Tobey and Kelleyhouse 2007, ADF&G 2008, Becky Schwanke, pers. comm.)

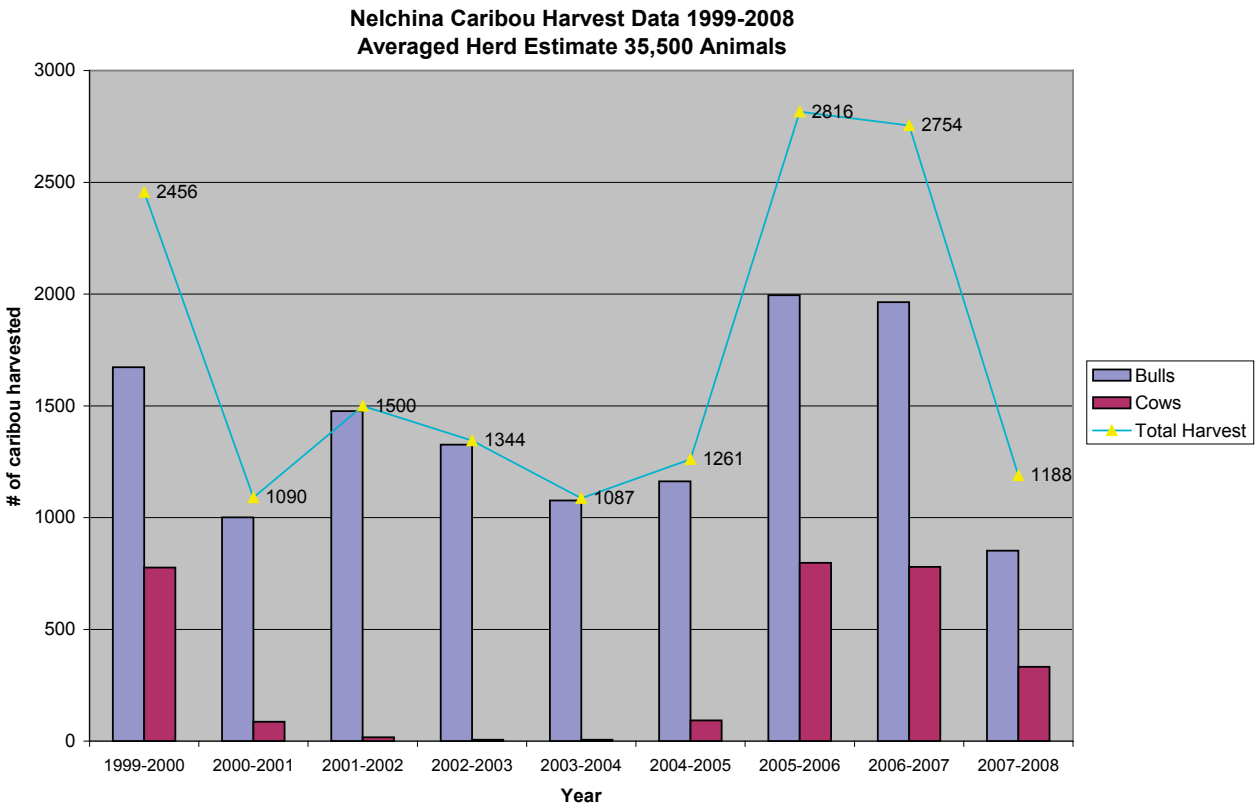


Figure 1. Nelchina Caribou Harvest Data (1999–2008) by sex of harvested animal and total harvest of all animals.

From 2001 to 2010, the fall population estimates for the NCH have remained relatively stable with the estimated herd size between 30,000–44,000 animals (**Table 1**). In June 2007, a post-calving census estimated the NCH to be approximately 32,569 caribou (ADF&G 2008), in June 2009, the census showed approximately 33,146 caribou (ADF&G 2009a), and in July 2010 the census showed an increase to 44,954 caribou (ADF&G 2010c).

Distribution and Movements

ADF&G conducts aerial composition surveys twice each year (Tobey and Kelleyhouse 2007). In June, to determine postcalving aggregations and herd productivity and in October to ascertain bull:cow and calf:cow ratios. In addition, aerial surveys are flown in the winter to determine winter distribution. Radio-collared caribou are located seasonally to delineate herd distribution and seasonal range use.

Winter habitat for the NCH ranges from northern Unit 13 to Unit 20E. Caribou winter range in 20E is generally considered high quality due to high lichen biomass as a result of old burns (>50 years) (Dale 2000, Joly et al. 2003). In 2004, a large proportion of NCH winter range in Unit 20E burned. Many caribou still winter in 20E, although caribou now utilize adjacent unburned areas. Winter distribution for the NCH in 2006 extended into Unit 13E, across 13A and 13B, and northeast into Units 11, 12 and 20E (Tobey and Kelleyhouse 2007). In some years, a small number of caribou winter in Unit 13D and have been observed as far south as Edgerton Highway.

The eastern Talkeetna Mountains, from the Fog Lakes southeast to the Little Nelchina River, is the typical area for calving for the NCH with the core calving area extending from the Little Nelchina River north to Kosina Creek (Tobey and Kelleyhouse 2007).

Harvest History

The fall caribou season is the most popular time to hunt for State hunts (Tobey 2005) and the NCH are typically scattered widely over the western portion of Unit 13 (Schwanke 2011). Denali National Park lands within Unit 13 are on the western portion of all of Unit 13 and lie within subunit 13E. In order to hunt the Denali National Park lands, Federally qualified users must live in the resident zone community or have a 13.440 permit. Federal subsistence hunting areas on the eastern end of Unit 13 (BLM lands) may have limited number of caribou available (Schwanke 2011) during the fall season.

Successful harvests in the fall make the winter season more susceptible to emergency closures when the harvest quota is reached before the end of the season on March 31. A large percentage of NCH typically migrates out of Unit 13 in October and does not return from wintering areas in Units 11, 12 and 20E until April. Therefore success during the winter season is largely dependent upon the number of caribou that remain in Unit 13 (Tobey and Kelleyhouse 2007) and if the season has been closed due to successful harvest in the fall season reaching the harvest objective. .

Between 2004 and 2009, the State hunts (TC566/RC566) were the primary source for harvest of the NCH and accounted for 75% of the overall harvest (**Figure 2**). The Federal registration hunts (FC1302; formerly RC513/514), limited to those users with a positive customary and traditional use determination for caribou in Unit 13 are administered by the BLM and comprised 24% of the harvest between 2004 to 2009 (**Figure 2**). From 2004 to 2009, participation in the Federal registration hunt has remained relatively consistent with an average annual harvest of 420 caribou, (ranged from 273 to 610). In 2009, the joint harvest quota was 1000 caribou. The community hunt harvested 125 caribou and the total harvest from State and Federal hunts was 810 caribou for 2009–2010 (ADF&G 2010c).

The majority of the harvest occurs under State regulations on State managed land (**Figure 3**). Federal lands make up approximately 10% of total lands in Unit 13, Much of the Federal harvest occurs when caribou cross along the Richardson Highway between Paxson and Sourdough during the fall migration. Additional caribou are also available to qualified Federal user throughout the entire season in small areas of 13E near Broad Pass in Denali National Park and on BLM lands along the Denali Highway near Tangle Lakes (Tobey 2005). The harvest chronology shows that most of the State harvest occurs during August and September (**Figure 4**). Federally qualified subsistence users currently have an additional 10 day season at the end of September and the harvest within the first week of August is minimal compared with the State harvest during the same time period (**Figure 5**). In addition, the weather would have little effect of having a wanton waste of harvesting the meat from the animal, since the average high and low temperatures from 2008–2010 are similar between the first week (57° high, 47° low) and second week (62° high, 46° low) of August (Weather Underground 2011).

Current Events Involving Species

At the BOG meeting in March 2011, Proposal 50 addressed revisions to the State caribou seasons in Unit 13. For 2011–12, State caribou hunting in Unit 13 will occur under a Tier I hunt, a subsistence harvest hunt, and drawing hunts (Schwanke 2011, personal communication).

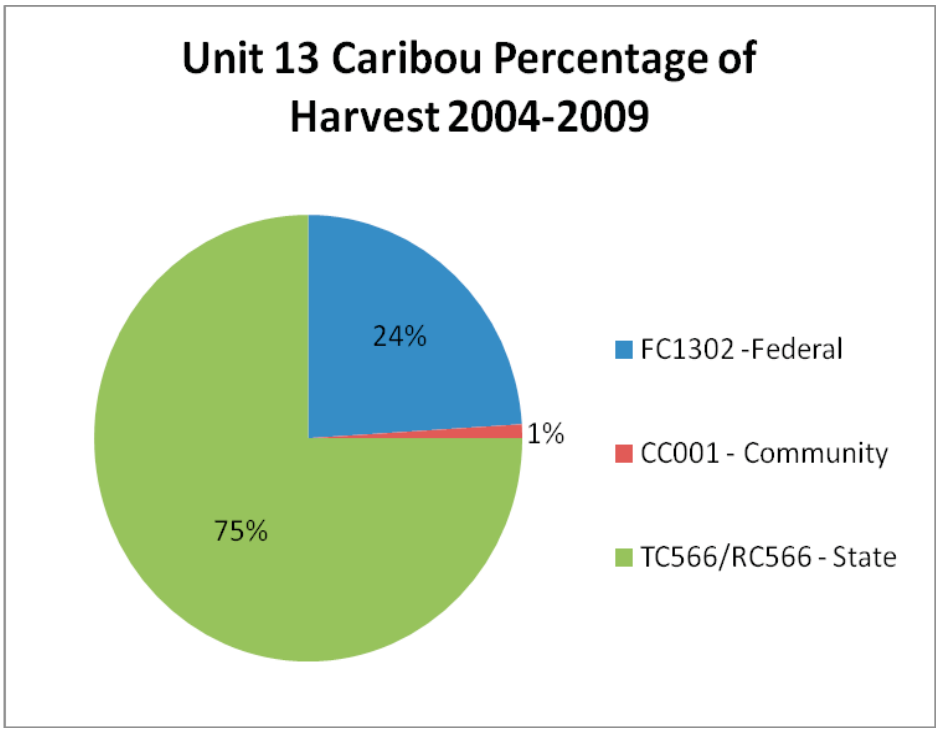


Figure 2. Unit 13, Percentage of Total Harvest by State and Federal Hunts, 2004–2009.

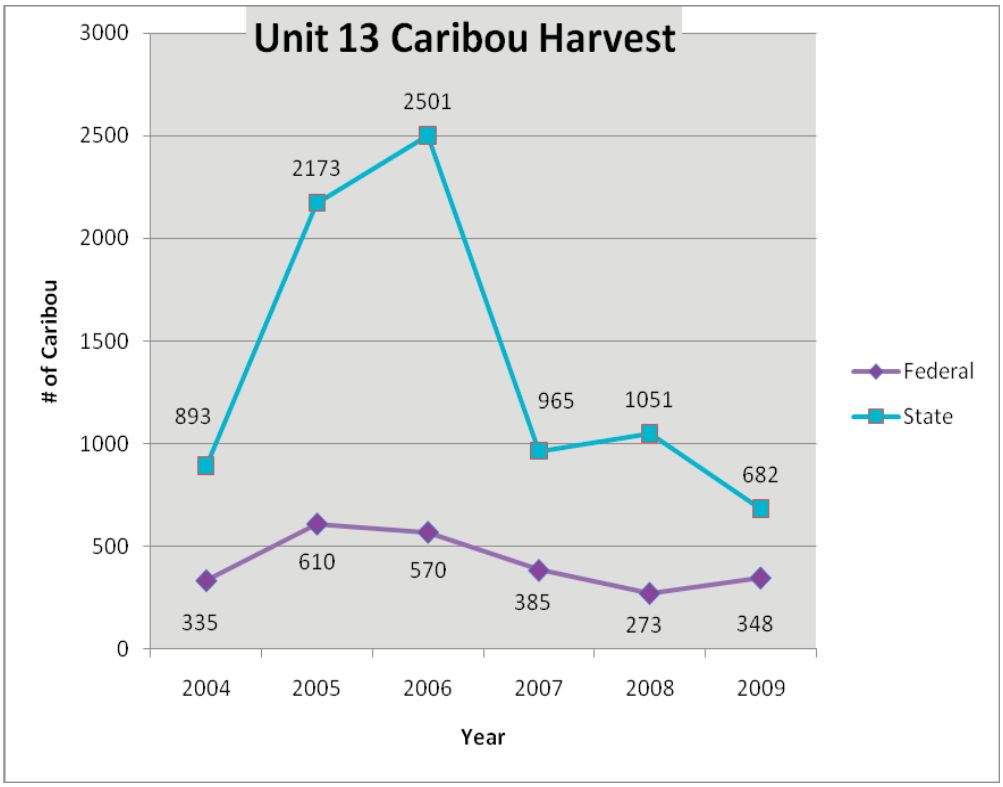


Figure 3. Unit 13, Harvest by predominate State and Federal Hunts (TC566, FC1302), 2004–2009.

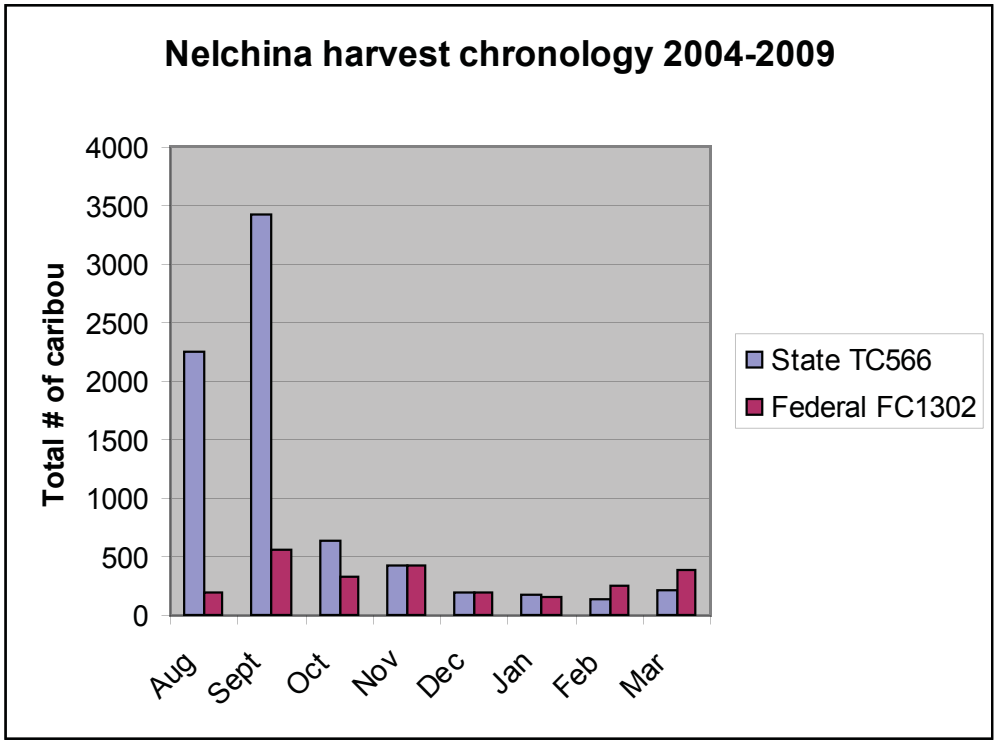


Figure 4. Unit 13, Harvest chronology by month early and late season (TC566, FC1302), 2004–2009.

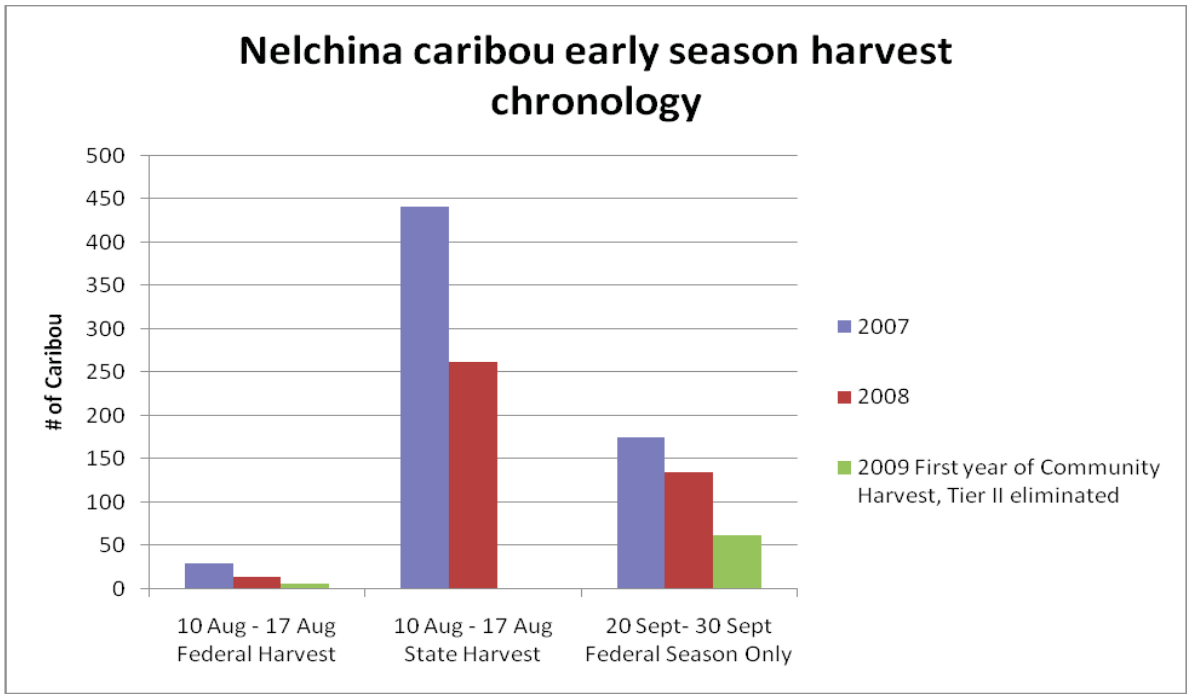


Figure 5. Unit 13, Harvest chronology for state and federal hunts for early season August 10 – Sept. 30 (TC566, FC1302), 2007–2009.

Effects of the Proposal

If this proposal were adopted, it would add an additional 9 days to the beginning of the Federal harvest season. Giving Federally qualified subsistence users an additional 9 days prior to the opening of the State hunt would provide an additional opportunity for Federal users. However, there should be no conservation concerns for the NCH as the productivity and recruitment for the herd has been high with an average of 41 calves:100 cows (2008–2010) and 65 calves:100 cows in 2011, and if necessary Federal mangers can close the hunt to avoid exceeding the harvest quota. Additionally, in 2010, more State permits were awarded for several hunts due to the high productivity of the herd. The harvest chronology shows that most of the State harvest occurs during August and September.

OSM PRELIMINARY CONCLUSION

Support Proposal WP12-25

Justification

The majority of the NCH harvest comes from State administered hunts, which are closed by Emergency Order when the annual harvest quota is reached. The Federal hunt, if necessary, can also be closed to avoid exceeding the annual harvest quota. Currently conservation concerns seem minimal considering the high productivity and recruitment of an average of 41 calves:100 cows (2008–2010) and 65 calves: 100 cows in 2011 which are above the management goal of 40 calves:100 cows. Providing an opportunity for Federally qualified subsistence users to harvest a caribou prior to the opening of a State season may not give a significant opportunity due to weather and variance in migratory patterns of the NCH; however there are no conservation concerns and the population of caribou can support the additional 9 days of opportunity. In addition, the weather would have little effect of having a wanton waste of harvesting the meat from the animal, since he average high and low temperatures from 2008–2010 are similar between the first week and second week of August.

LITERATURE CITED

ADF&G 2010a. Overview of Nelchina Caribou Herd Regulation and Harvest History. Special Publication No. BOG 2010-05.

ADF&G 2010b. Hunting and Trapping Emergency Order No. 04-1-10. Alaska Department of Fish and Game. Glennallen, AK.

ADF&G 2010c. Game Mangement Unit 13: Nelchina Caribou Herd Report. Alaska Department of Fish and Game. Glennallen, AK. 6pages.

ADF&G 2009a. Caribou Annual Survey and Inventory. Federal Aid Annual Performance Report Grant W-33-7, Anchorage, AK.

ADF& G 2009b. Harvest ticket database. Microcomputer database, updated June 16, 2009.

ADF&G 2008. Caribou Annual Survey and Inventory. Federal Aid Annual Performance Report Grant W-33-6, Anchorage, AK.

Bergerud, A.T. 2000. Caribou. Pages 658–693 *in* S. Demarais and P.R. Krausman, editors. Ecology and Management of Large Mammals in North America. Prentice Hall Press. Upper saddle River, NJ. 778 pages.

Cameron, R.D., W.T. Smith, and S.G. Fancy. 1991. Comparative body weights of pregnant/lactating and non-pregnant female caribou. Proceedings of North American Caribou Workshop 4:109–114.

Cameron, R.D. W.T. Smith, S.G. Fancy, K.L. Gerhart, and R.G. White. 1993. Calving success of female caribou in relation to body weight. Canadian Journal of Zoology 71:480–486.

Cebrian, Merben. 2009. Bureau of Land Management, Wildlife Biologist.

Crete, M. and J. Huot. 1993. Regulation of a large herd of caribou: Summer nutrition affects calf growth and body reserves of dams. Canadian Journal of Zoology 71:2291–2296.

Dale, B.W. 2000. The Influence of Seasonal Spatial Distribution on Growth and Age of First Reproduction of Nelchina Caribou with Comparisons to the Mentasta Herd. Research Performance Report. 1 July 1999 – 30 June 2000. Federal Aid Annual Performance Report Grant W-27-3, Study 3.44. Anchorage, AK.

FWS. 2009. Federal registration permit database. Microcomputer database, updated June 16, 2009.

Griffith, B., D.C. Douglas, N.E. Walsh, D.D. Young, T.R. McCabe, D.E. Russell, R.G. White, R.D. Cameron, and K.R. Whitten. 2002. The Porcupine caribou herd. Pages 8–37 *in* D. C. Douglas, P.E. Reynolds, and E. B. Rhode, editors. Arctic Refuge coastal plain terrestrial wildlife research summaries. U.S. Geological Survey, Biological Resources Division, Biological Science Report USGS/BRD BSR-2002–0001.

Holand, O., K.H. Roed, A. Mysterud, J. Kumpula, M. Nieminen, and M. E. Smith. 2003. The effect of sex ratio and male age structure on reindeer calving. Journal of Wildlife Management 67:25–33.

Joly, K., B.W. Dale, W.B. Collins, and L.G. Adams. 2003. Winter habitat use by female caribou in relation to wildland fires in interior Alaska. Canadian Journal of Zoology 81:1192–1201.

Skogland, T. 1985. The effects of density-dependent resource limitations on the demography of wild reindeer. Journal of Animal Ecology 54:359–374.

Schwanke, R.A. 2011. Wildlife biologist. Personal communication: email. ADF&G. Glennallen, AK.

Schwanke, R.A. 2009. Wildlife biologist. Personal communication: email. ADF&G. Glennallen, AK.

Tobey, B. 2001. Caribou management report of survey-inventory activities. Pages 97–113 *in* C Healy, editor. Federal Aid in Wildlife Restoration. Grants W-27-2 and W-27-3. Project 3.0. Alaska Department of Fish and Game. Juneau, Alaska.

Tobey, B. 2003. Units 13 and 14B caribou management report. Pages 108–124 in C. Healy, editor. Caribou management report of survey and inventory activities 1 July 2000 – 30 June 2002. Alaska Department of Fish and Game. Juneau, Alaska.

Tobey, B. 2005. Units and 14B caribou management report. Pages 89–104 *in* C. Brown, editor. Caribou management report of survey and inventory activities 1 July 2002–30 June 2004. Alaska Department of Fish and Game. Juneau, Alaska.

Tobey B. and R. Kelleyhouse. 2007. Units 13 and 14B caribou management report. Pages 83–99 *in* P. Harper, editor. Caribou management report of survey and inventory activities 1 July 2004–30 June 2006. Alaska Department of Fish and Game. Juneau, Alaska.

Weather Underground. www.wunderground.com. June 14, 2011.

Whitten, K.R., G.W. Garner, F.J. Mauer, and R.B. Harris. 1992. Productivity and early calf survival in the Porcupine caribou herd. Journal of Wildlife Management 56:201–212.

ADF&G Comments on WP12-25
August 31, 2011; Page 1 of 2

Alaska Department of Fish and Game
Comments to Regional Advisory Council

Wildlife Proposal WP12-25: This proposal requests extending the dates of the federal subsistence caribou hunt in Unit 13.

Introduction: This proposal was submitted to liberalize the federal subsistence caribou hunting season dates by 9 days in Unit 13 by changing the season from August 10 through September 30 to August 1 through September 30. The proponent indicates the status of the Unit 13 caribou herd has met management population level objectives and liberalizing the federal subsistence hunting season is warranted.

Impact on Subsistence Users: Adoption of this proposal will provide an additional 9 days of opportunity for federal subsistence hunters to harvest caribou in Unit 13. Adoption of this proposal will increase federal subsistence caribou hunting opportunity, though not success. The distribution of Nelchina caribou during early August typically ranges from the eastern Talkeetna mountains east to the MacLaren River drainage. Caribou rarely expand into the eastern portion of the unit, and into federal subsistence hunting areas until late August or early September.

Opportunity Provided by State: The Unit 13 state caribou hunting regulations follow:

> Residents may harvest one caribou per household by Tier I registration permit (RC566) from August 10 through September 21 and from October 21 through March 31. Community subsistence harvest permits are also available to residents. The bag limit and the season dates are the same as RC566. Additionally, a limited number of drawing permits are available to residents from August 20 through September 21 and from October 21 through March 31.
>
> Unit 13 is closed to hunting caribou by non-residents.

Conservation Issues: The Nelchina Caribou Herd is managed for near maximum sustained yield for the benefit of Alaskan hunters. Annual reproduction and survival dictate the annual harvestable surplus. With calves born during late May and early June, many cows are still accompanied by a calf in early August. Additional hunting pressure during this time is not in the best interest of maximum calf survival and recruitment.

Enforcement Issues: Differences in federal and state regulations resulting from adoption of this proposal will add additional enforcement issues. If adopted, federal and state regulations will be become further out of alignment.

Other Comments: Current federal hunting season dates sufficiently accommodate hunters during the period when caribou are abundant in federal subsistence hunting areas. This federal subsistence caribou hunt in Unit 13 has never been closed by emergency order, providing 210 days of caribou hunting opportunity each year. The additional hunting opportunity of this proposal would not be expected to outweigh the negative impact it would have on calf survival. Federal subsistence hunters currently receive 2 permits per person, and have an additional 10

days to hunt from 20 September to 30 September versus state hunters. Adding an additional 10 day period in early August would push the caribou season into warmer weather. Should caribou be harvested, meat spoilage could become an issue.

Recommendation: Oppose

WP12-26 Executive Summary	
General Description	Proposal WP12-26 requests the closure of hunting and trapping seasons for red fox in Units 7 and 15. *Submitted by Kenai National Wildlife Refuge in conjunction with the Chugach National Forest*
Proposed Regulation	**Unit 7—Fox, Red (including Cross, Black and Silver Phases)** *Hunting* ~~*Nov. 1 – Feb. 15*~~ ~~*2 foxes*~~ ***No open season*** *Trapping* ~~*Nov. 10 – Feb. 28*~~ ~~*No limit.*~~ ***No open season*** **Unit 15—Fox, Red (including Cross, Black and Silver Phases)** *Hunting, no established harvest limit or season* *Trapping* ~~*Nov. 10 – Feb. 28*~~ ~~*1 fox*~~*.* ***No open season*** *§ __.26(n)(15)(iii)(D) Unit – specific regulations: You may not take red fox in Unit 15 by any means other than a steel trap or snare*
OSM Preliminary Conclusion	**Support**
Southcentral Regional Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	**Oppose**
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP12-26

ISSUES

Proposal WP12-26, submitted by Kenai National Wildlife Refuge in conjunction with the Chugach National Forest requests the closure of hunting and trapping seasons for red fox in Units 7 and 15.

DISCUSSION

The proponents request that the Federal harvest season be closed since red fox are uncommon to rare on the Kenai Peninsula and suitable habitat is limited to the central portions of Unit 15 (USFWS 2009). The proponents state there has been only one unconfirmed report of a red fox being trapped in recent years. Additionally unconfirmed sightings of red fox have been received sporadically from the public over the last three decades. The proponents believe low population levels may be due to competition and predation by coyotes and other predators. The low fox population on the Kenai Peninsula has led to conservation concerns as there is no harvestable surplus and any continued harvest may lead to local extirpation of the species. There is no hunting season for red fox under State regulations in Units 7 and 15. While there is a trapping season for red fox under State regulations in Units 7 and 15 with a 1 fox harvest limit, due to conservation concerns for the species the Kenai National Wildlife Refuge has closed red fox trapping on the Refuge through the special conditions of the Kenai NWR annual trapping permit. Eliminating Federal subsistence harvest is a step toward facilitating the recovery of the fox population.

Existing Federal Regulations

Unit 7—Fox, Red (including Cross, Black and Silver Phases)

Hunting *2 foxes*	*Nov. 1 – Feb. 15*
Trapping *No limit.*	*Nov. 10 – Feb. 28*

Unit 15—Fox, Red (including Cross, Black and Silver Phases)

Hunting, no established harvest limit or season

Trapping *1 fox.*	*Nov. 10 – Feb. 28*

§ __.26(n)(15)(iii)(D) Unit –specific regulations: You may not take red fox in Unit 15 by any means other than a steel trap or snare Special Provisions: Taking a red fox by any means other than a steel trap or snare is prohibited.

Proposed Federal Regulations

Unit 7—Fox, Red (including Cross, Black and Silver Phases)

Hunting	*~~Nov. 1 – Feb. 15~~*
~~2 foxes~~	***No open season***
Trapping	*~~Nov. 10 – Feb. 28~~*
~~No limit.~~	***No open season***

Unit 15—Fox, Red (including Cross, Black and Silver Phases)

Hunting, no established harvest limit or season

Trapping	*~~Nov. 10 – Feb. 28~~*
~~1 fox~~.	***No open season***

§ __.26(n)(15)(iii)(D) Unit –specific regulations: You may not take red fox in Unit 15 by any means other than a steel trap or snare

Existing State Regulations

Unit 7—Fox

Hunting	*No state season*
Trapping	*Nov. 10 – Feb. 28*
1 fox	

Unit 15—Fox

Hunting	*No state season*
Trapping	*Nov. 10 – Feb. 28*
1 fox.	

Note: Recreational trapping for red fox, within those portions of the Kenai National Wildlife Refuge within Unit 7 and 15, is currently closed through the special conditions of the Kenai NWR annual trapping permit.

Extent of Federal Public Lands

Approximately 78% of the lands in Unit 7 are Federal public lands, consisting of 50% Chugach National Forest lands managed by the U.S. Forest Service, 23% Kenai Fjords National Park lands managed by the National Park Service, and 5% of lands managed by the Kenai National Wildlife Refuge (KNWR) (**Unit 7 and 15 maps**). Kenai Fjords National Park lands are not open to subsistence uses. In Unit 15, 52% of the lands are managed by the Kenai National Wildlife Refuge. Less than 1% are NPS and U.S. Forest Service managed lands

Customary and Traditional Use Determinations

In Unit 7, all rural residents have a positive customary and traditional use determination for hunting red fox. In Unit 15, there is no Federal subsistence priority to hunt red fox. For trapping, all rural residents have a positive customary and traditional use determination for red fox in Unit 7 and 15.

Regulatory History

The current Federal regulations for hunting and trapping red fox in Units 7 and 15 have been the same since 1998.

There is no hunting season for red fox under State regulations in Units 7 and 15. Although there is a trapping season for red fox under State regulations in Units 7 and 15, due to conservation concerns for the species the Kenai National Wildlife Refuge has closed red fox trapping on the Refuge through the special conditions of the Kenai National Wildlife Refuge annual trapping permit.

Management Direction

The Kenai National Wildlife Refuge has designated the red fox as a species of special interest, a potential candidate for local extirpation, and a candidate for restoration efforts (USFWS 2009). ADF&G management objectives for red fox and other furbearers within Unit 7 and 15 are to allow for sustainable harvests and to monitor the harvest through sealing and trapper questionnaires (McDonough 2007).

Biological Background

Prior to 1980, the distribution and density of red fox on the Kenai Peninsula was limited and likely decreased due to competition and predation from increased numbers of coyotes and wolves (Peterson and Woolington 1982). Coyotes engage in interference and exploitative competition with red foxes that can reduce and significantly limit red fox populations (Dekker 1989, Major and Sherburne 1987). Red foxes will avoid areas and habitats heavily used by coyotes and will typically maintain their home ranges on the periphery of coyote home ranges (Dekker 1989, Major and Sherburne 1987). In Unit 15C within the Caribou Hills, a small remnant population of red foxes exists with an occasional observation reported from other areas of the Kenai Peninsula such as Skilak and Tustumena lakes (USFWS 2009, McDonough 2007).

All fox species exhibit wide fluctuations in abundance depending on food availability. Low food abundance typically affects reproductive success and lowers juvenile survival. Adult survival may also be affected as individuals may need to forage further and longer which may make them susceptible to predation and increase energy expenditure (Lindstrom 1989). Harvesting by humans is a significant source of mortality for red fox as is disease, primarily rabies (Storm et al. 1976).

Harvest History

The last known harvests of red foxes on the Kenai Peninsula were in 1969–1970 and 1978–1979 when a total of 12 foxes were taken. No confirmed harvest has been reported on the Kenai Peninsula in the last 25 years (USFWS 2009). There have been unconfirmed sightings since 2002 near Kasilof, in the Caribou Hills, and east toward Cooper Landing (USFWS 2009).

Canines (wolves, foxes, and coyotes) are typically taken in either blind sets (to capture the animal as it passes through an area) or with a scent post foothold set (draws animal to particular location where it

steps into the trap). Due to a canine's behavior of using scent to mark and identify territory and travel corridors, incidental take of other species of canines is possible in sets made for another species of canine. Coyotes and wolves are present on the Kenai Peninsula, and both have no limit for trapping from Nov. 10 – Mar. 31. In the 2008–2009 Alaska Trapper Report, there were 44 coyotes trapped and 12 wolves in Units 7 and 15. It would be far more unusual, however, to take a canine in a set placed for beaver (typically as these sets are in placed in water) or in a leaning pole set for mink/marten/weasel. Canines might be taken in a castor mound set for beaver or a ground cubby for mink/marten/weasel (where traps are on dry ground and scent or bait may draws the target animal in), however, the chance is very low.

The only current harvest related data for red fox are fur acquisition and fur export reports, which record sales transactions between trappers and fur dealers, and record shipments of furs outside of the State for sale or tanning. Because such transactions can include furs taken in previous years, and because many trappers keep their trapped furs for tanning and use at home, this information is not an exact measure of harvest levels (Scott and Kephart 2002). In 2008–2009, 56% of Southcentral trappers stated they kept their red fox furs and ranked the red fox as the least important furbearer to trap within Southcentral Alaska (Schumaker 2010). Units 7 and 15 are two of the seven units that comprise the Southcentral region and there is no specific data for the Kenai Peninsula.

Effects of the Proposal

If this proposal is adopted, the Federal subsistence hunting and trapping seasons for red fox in Units 7 and 15 would be eliminated. Closing the seasons would have little effect on subsistence users since red fox already occur at such low densities. Currently, there is no State red fox hunting season in either unit. Additionally, trapping red fox under State regulations is not allowed on the Kenai National Wildlife Refuge (52% of Unit 15) and the Kenai Fjords National Park (23% of Unit 7). Red fox is a species of interest for restoration on the Kenai National Wildlife Refuge and closing the Federal season may prevent local extirpation of the species and allow the population to increase.

OSM PRELIMINARY CONCLUSION

Support Proposal WP 12-26

Justification

The red fox is a species of interest for restoration on the Kenai National Wildlife Refuge and the observed low abundance provides no harvestable surplus on the Kenai Peninsula. Trappers within Southcentral Alaska have stated that red fox is the least important furbearer to trap, and closing the Federal season will have little effect on subsistence users. Harvesting by humans is a significant source of mortality for red fox (Storm et al. 1976) and closing the Federal season may prevent local extirpation.

LITERATURE CITED

Dekker, D. 1989. Population fluctuations and spatial relationships among wolves, coyotes, and red foxes, in Jasper National Park, Alberta. Canadian Field Naturalist 103:261–264.

Lindstrom, E. 1989. Food limitation and social regulation in a red fox population. Holarctic Ecology 12:70–79.

Major, J.T., and J.A. Serburne. 1987. Interspecific relationships of coyotes, bobcats, and red foxes in western Maine. Journal of Wildlife Management 51:606–616.

McDonough, T. 2007. Units 7 and 15 furbearer. Pages 91–96 *in* P. Harper, editor. Furbearer management report of survey and inventory activities 1 July 2003 – 30 June 2006. Alaska Department of Fish and Game. Project 7.0 Juneau, Alaska.

Peterson, R. O., and J.D. Woolington. 1992. The apparent extirpation and reappearance of wolves on the Keani Peninsula, Alaska *in* F.H. Harrington and P.C. Paquet, editors. Wolves of the World, Noyes Publications, Mill Road, Park Ridge, New Jersey. 477 pages.

Scott, R. and J. Kephart. 2002. Statewide Annual Report: Trapper Questionnaire. Alaska Department of Fish and Game, Division of Wildlife Conservation. 2000–2001. Juneau, AK.

Schumacker, T. 2010. Statewide Annual Report: Trapper Questionnaire. Alaska Department of Fish and Game, Division of Wildlife Conservation. 2008–2009. Juneau, AK.

Storm, G.L., R.D. Andrews, R.L. Phillips, R.A. Bishop, D.B. Siniff, and J.R. Tester. 1976. Morphology, reproduction, dispersal, and mortality of Midwestern red fox populations. Wildlife Monographs 49:1–82.

USFWS 2009. Revised Comprehensive Conservation Plan and Environmental Impact Statement. Kenai National Wildlife Refuge. Soldotna, Alaska.

ADF&G Comments on WP12-26
August 30, 2011; Page 1 of 1

Alaska Department of Fish and Game
Comments to Regional Advisory Council

Wildlife Proposal WP12-26: This proposal requests total closure of federal subsistence red fox trapping and hunting in all federal public lands in Units 7 and 15.

Introduction: This proposal was submitted to close all federal subsistence red fox hunting and trapping in Units 7 and 15 encompassing all federal public lands on the Kenai Peninsula. The proponent indicates the combination of low reported harvest and infrequent sightings indicates a lack of harvestable surplus for this population. The proponent indicates adoption of this proposal is unlikely to allow the species to fully recover but adoption may prevent local extirpation.

Impact on Subsistence Users: Adoption of this proposal will prohibit the harvest of red fox by federal subsistence users in Units 7 and 15. Adoption of this proposal is expected to have little impact on federal subsistence hunters and trappers due to the low probability of encountering red fox in Units 7 and 15. If this proposal is adopted, federal subsistence trappers who incidentally take a red fox will be required to surrender the carcass to the nearest Alaska Department of Fish and Game or Department of Public Safety office. Subsistence users will be affected by the implementation of regulations which differ from those of the state in this area which are likely to be confusing and present enforcement issues.

Opportunity Provided by State: The state trapping regulations for Units 7 and 15 provides a November 10 through February 28 season with a bag limit of 1 red fox per year. There is no open hunting season for red fox in Units 7 and 15 under state hunting regulations.

Conservation Issues: Red fox numbers in Units 7 and 15 are low and are present in low densities. The Department does not have population estimates for this population. Red fox may be taken by both hunters and trappers in this area. The reported red fox harvest in Unit Units 7 and 15 in the last 20 years has been very low.

Enforcement Issues: Differences in federal and State regulations resulting from adoption of this proposal will create enforcement issues in areas with mixed land ownership.

Other Comments: The department recommends the federal public land managing agencies reaffirm to federal subsistence users any incidentally harvested foxes on all lands in Alaska are property of the State of Alaska. Collection of harvested fox carcasses for scientific analysis will be key to furthering knowledge about the population. State regulations grant temporary amnesty for the possession of incidentally harvested fur bearers during a close season as long as the harvester is transporting the harvest to designated State of Alaska staff.

Recommendation: Oppose

WP12-27 Executive Summary	
General Description	Proposal WP12-27 requests a positive customary and traditional use determination for goat in Unit 11 by residents of Tok Cutoff Road (mileposts 79 –110, Mentasta Pass), and Nabesna Road (mileposts 25–46). *Submitted by the Upper Tanana Fortymile Fish and Game Advisory Committee*
Proposed Regulation	**Customary and Traditional Use Determination Unit 11—Goat** *Residents of Unit 11, Chitina, Chistochina, Copper Center, Gakona, Glennallen, Gulkana, Mentasta Lake, Slana, Tazlina, Tonsina, and Dot Lake,* ***Tok Cutoff Road (mileposts 79–110 Mentasta Pass), and Nabesna Road (mileposts 25–46).***
OSM Preliminary Conclusion	**Support**
Southcentral Regional Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	**Support**
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP12-27

ISSUES

Proposal WP12-27, submitted by the Upper Tanana Fortymile Fish and Game Advisory Committee, requests a positive customary and traditional use determination for goat in Unit 11 by residents of Tok Cutoff Road (mileposts 79 –110, Mentasta Pass), and Nabesna Road (mileposts 25–46).

DISCUSSION

Proposal WP12-27 seeks a positive customary and traditional use determination for the residents of Tok Cutoff Road (mileposts 79 –110, Mentasta Pass) and Nabesna Road (mileposts 25–46), referred to in this analysis as the proposal area (see **Map 1**), to harvest goat in Unit 11. The proponent states that residents of the proposal area have subsistence use patterns that closely resemble those of Slana and Mentasta Lake (located in Unit 13). Further, the proponent states that the residents of the proposal area may have been inadvertently omitted from the current customary and traditional use determinations. Under current Federal subsistence regulations, the customary and traditional uses of the residents of the proposal area also have been recognized by the Federal Subsistence Board for black and brown bear, sheep, and wolf in Unit 11 and caribou and moose in Unit 11 north of the Sanford River. The proposed regulation change would more closely align the customary and traditional use determination for goat with these other species.

Existing Federal Regulation

> **Customary and Traditional Use Determinations Unit 11—Goat**
>
> *Residents of Unit 11, Chitina, Chistochina, Copper Center, Gakona, Glennallen, Gulkana, Mentasta Lake, Slana, Tazlina, Tonsina, and Dot Lake.*

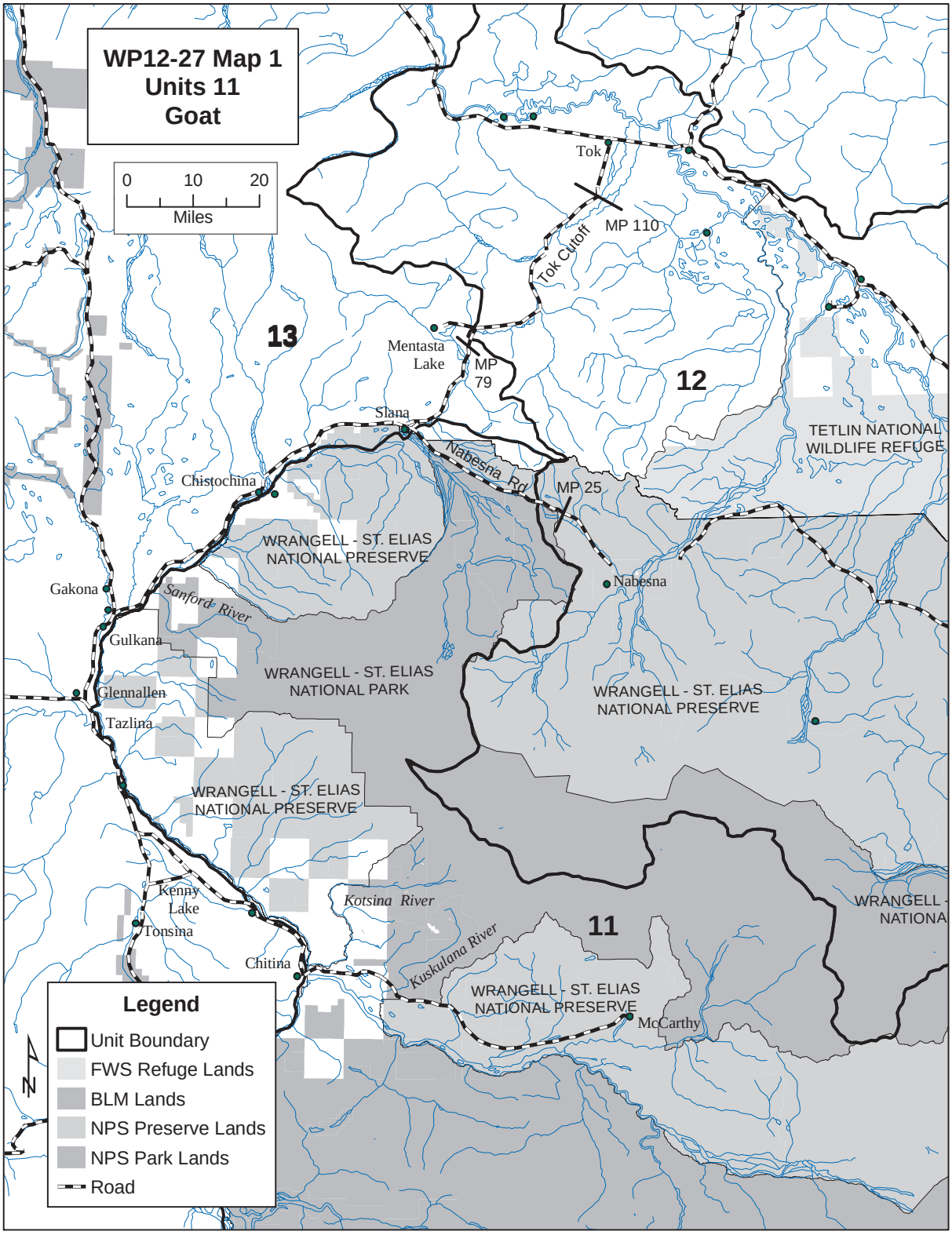
Proposed Federal Regulation

> **Customary and Traditional Use Determination Unit 11—Goat**
>
> *Residents of Unit 11, Chitina, Chistochina, Copper Center, Gakona, Glennallen, Gulkana, Mentasta Lake, Slana, Tazlina, Tonsina, and Dot Lake,* ***Tok Cutoff Road (mileposts 79–110 Mentasta Pass), and Nabesna Road (mileposts 25–46).***

Additionally, Federal regulations provide a harvest limit of 45 goats after which the Wrangell-St. Elias National Park Superintendent will close Federal public lands to goat hunting.

Extent of Federal Public Lands

Federal public lands comprise approximately 81% of Unit 11 and include lands managed by Wrangell St. Elias National Park and Preserve (79%), Chugach National Forest (2%) and Bureau of Land Management (0.1%).


WP12-27 Map 1
Units 11
Goat
0 10 20
Miles
Tok
MP 110
Tok Cutoff
13
Mentasta Lake
MP 79
12
Slana
Nabesna Rd
MP 25
TETLIN NATIONAL WILDLIFE REFUGE
Chistochina
WRANGELL - ST. ELIAS NATIONAL PRESERVE
Nabesna
Gakona
Sanford River
Gulkana
WRANGELL - ST. ELIAS NATIONAL PARK
WRANGELL - ST. ELIAS NATIONAL PRESERVE
Glennallen
Tazlina
WRANGELL - ST. ELIAS NATIONAL PRESERVE
Kenny Lake
Kotsina River
Tonsina
11
Chitina
Kuskulana River
WRANGELL - ST. ELIAS NATIONAL PRESERVE
McCarthy
Legend
Unit Boundary
FWS Refuge Lands
BLM Lands
NPS Preserve Lands
NPS Park Lands
Road
N

Regulatory History

When the Federal Subsistence Board (Board) assumed management of subsistence wildlife resources on Federal public lands in 1990, it adopted State of Alaska customary and traditional use determinations. In 1990, in Unit 11, there was a "no subsistence" determination for goat under State regulations, and therefore a "no subsistence" determination was given after adoption from the State.

In 1997, the Board addressed the customary and traditional use of goat in Unit 11 for rural residents of Unit 12 and residents of McCarthy, Kennecott, and Dot Lake. The Board recognized the customary and traditional use of goat, but adopted the submitted proposal with modification to acknowledge rural residents of Unit 11, and several additional communities. The modified regulations followed the recommendations of the Eastern Interior Regional Advisory Council to give a positive customary and traditional use determination for the residents of Unit 12 and the residents of the Native Village of Dot Lake, Chistochina, Gulkana, Gakona, Mentasta, Copper Center, Chitina, and Tazlina. Some of these communities are in Unit 13 situated on or near the border of Unit 11.

In 1997, the State submitted a request for reconsideration (RFR) opposing the new regulation, however, the RFR was rejected by the Federal Subsistence Board. In 1998, further amendments were made to the customary and traditional use determination for goat in Unit 11. Glennallen was added to the list of communities with a positive customary and traditional use determination for goat in Unit 11. Also in 1998, Proposal 25 (WP98-70) was submitted to request individual customary and traditional use determinations for several individual families who were not part of the communities with positive customary and traditional use determinations to have their uses recognized for goat in Unit 11. Proposal 25 (WP98-70) was deferred until the following year. In 1999, Proposal 11 (WP98-25) was adopted with modification to recognize the customary and traditional uses of the Grangaard and Entsminger families. In 2000, the Board supported adding members of the Entsminger family, who had been left out of the previous year's positive customary and traditional use determination decision.

By comparison, other large mammal species have had similar regulatory changes made over the past decade, including the regulations for sheep, brown bear, and black bear. Residents of the Tok Cutoff Road (mileposts 79–110, Mentasta Pass) and the Nabesna Road (mileposts 25–46) have positive customary and traditional use determinations in Unit 11 for sheep, brown bear, and black bear. The residents of these areas have had a positive customary and traditional use determination for sheep since 1991/1992, and for brown bear and black bear since the last regulatory cycle (2010). Thus, after careful review, the Board decided that indeed the residents residing along the Tok Cutoff Road (mileposts 79–110, Mentasta Pass), and the Nabesna Road (mileposts 25–46) have an established pattern of use for brown and black bear, as well as for other species.

Harvest History

Distribution

Mountain goats occur in the Wrangell and Chugach mountains of Unit 11. These areas of Southcentral Alaska, along with small populations in the Talkeetna Mountains in Unit 13A and the Chulitna Mountains near Cantwell in Unit 13E, represent the northernmost extent of the mountain goat range in Alaska (Coltrane 2008, Tobey 2008). Mountain goat habitat consists of alpine and subalpine areas, and access to cliffs or rocky ledges is important for goats to escape predators (Cote and Festa-Bianchet 2003). Good habitat is limited in Unit 11, although areas north of the Chitna River and west of the Lakina River have suitable habitat (Tobey 2008). The largest numbers of mountain goats have been observed near the Kennicott, Hawkins, and Barnard glaciers, McCarthy Creek, and MacColl Ridge (Tobey 2008). Goats

are primarily located in the southern part of Unit 11, from the Chitna River drainage and south (Cellarius 2011, pers. comm.)

Harvests

There is scant harvest data for communities that hunt in Unit 11. Data from previous ADF&G subsistence harvest surveys have not been updated since 1987, however, Wrangell-St. Elias National Park and Preserve have conducted subsistence harvest surveys this year (2011) and data will be available in the coming months. The previous ADF&G harvest surveys are highly limited in scope, revealing low harvest numbers for Mentasta, Mentasta Pass, Nabesna Road, and Slana in the years 1982 and 1987 (**Table 1**). Only residents of the Nabesna road had one sheep reported harvested in 1987.

Between 2005–2010 there were 574 hunting permits issued for Unit 11 including 495 resident and 79 non-resident permits (USFWS database). There were 26 goat hunting permits issued in 2011 for Unit 11 (USFWS 2011 database). Harvest reports are sparser for Unit 11 by relevant communities (**Table 2**). USFWS and ADF&G combined data (USFWS database) reveal data for Mentasta Lake and Slana, but not for Mentasta Pass, Nabesna Road, or the Tok cutoff road. In Mentasta Lake, nine permits were issued whereas in Slana only 5 permits were issued between 2005–2011.

Community Characteristics

The settlement patterns of the Upper Tanana and Copper Basin areas are diverse; some residents live in "recognized" communities and many households are dispersed along the road system between communities (Cellarius 2010, pers. comm. *in* staff analysis for WP10-29/30.). It is difficult to describe the community characteristics of Tok Cutoff Road (Mentasta Pass) and Nabesna Road because they are not communities per se. Neither are listed in the State of Alaska, Division of Community and Regional Affairs Community Database Information Summaries (DCRA 2011). Though Mentasta Pass and Nabesna Road were not listed as 'communities' on the DCRA database, they are considered a 'community' in the ADF&G new 'draft' Division of Subsistence community database (ADF&G 2011). However, the data for Mentasta Pass and Nabesna Road available through the Division of Subsistence have not been updated since 1987. They are not census designated places (U.S. Census 2000). Additionally, it is difficult to determine harvest estimates based on the ADF&G harvest ticket data because residents can get their mail at one of several post offices in the area and their mailing address does not necessarily indicate where they actually live.[1] In the spring of 2011, ADF&G Subsistence Division staff and staff at Wrangell-St. Elias National Park conducted harvest surveys in the area. The data are unavailable to date, but it is anticipated they will be available before the Board meets in January 2012 (Cellarius 2011, pers. comm.).

Tok Cutoff Road or Mentasta Pass

For the purposes of this analysis, the area of milepost 79–110 was designated by the proponent because this segment of the road extends north from the boundary of Units 12 and 13. The Mentasta Pass area of the Tok Cutoff Road was described as "homesites along the Tok Cutoff from milepost 79–110" (McMillan and Cuccarese 1988:127; NPS 1995:323).

According to ADF&G Subsistence Division surveys conducted in 1987, there were approximately 11 households in the Tok Cutoff Road area with an estimated population of 26 people (ADF&G 2011).

[1]For example: Nabesna Road residents are on a rural delivery route that have a Gakona Address and a Gakona zip code. The same zip code is also used to deliver mail to the Slana post office although mail for Slana has "Slana" on the address rather than "Gakona" (Cellarius 2010, pers. comm.).

Table 1. Subsistence Goat Harvest by Community (ADF&G CSIS Database 2011)

Community Name	Study Year	Percent Using	Percent Attempting to Harvest	Percent Harvesting	Reported Harvest	Reported Pounds Harvested	Average Lbs Harvested per Household	Per Capita Lbs Harvested
Mentasta	1982	0		0	0	0	0	0
Mentasta	1987	0	0	0	0	0	0	0
Mentasta Pass	1987	0	0	0	0	0	0	0
Nabesna Road	1982	12.5		12.5	1	72.5	9.06	2.08
Nabesna Road	1987	0	0	0	0	0	0	0
Slana	1982	0		0	0	0	0	0
Slana	1987	0	0	0	0	0	0	0
Slana Homestead	1987	0	0	0	0	0	0	0
Slana Homestead	1987	0	0	0	0	0	0	0

The Mentasta Pass or Tok Cutoff Road survey unit for the 1987 study was the area between mileposts 79–110 (McMillan and Cuccarese 1988: 127). These households harvested an estimated 187 pounds of subsistence resources per person or approximately 4,962 pounds for the Tok Cutoff Road area (ADF&G 2011). At the Fall 2009 EISRAC meeting, one member stated,

> *…the community around the Tok Cutoff, it is where I live, I know, but I can tell you that the surrounding area from Mentasta on the Tok Cutoff Road and Nabesna Road, we're like all one. We all kind of do the same thing. So I just wanted to align the people where we live (EISRAC 2009:322).*

No ADF&G Subsistence Division studies have been conducted on Mentasta Pass since 1987 and there is no specific census data for this area, thus it is unknown how many residents live in this area today; nor is there new information on their subsistence uses. As stated above, supplementary data on harvests may be available from the National Park Service (NPS) in the fall/winter of 2011.

Nabesna Road

For the purposes of this analysis, the area of milepost 25–46 was designated by the proponent because this segment of the road falls within Unit 12. Mileposts 1–24 of the Nabesna Road are in Unit 11.

Like Mentasta Pass, this area is primarily comprised of homesites along the Nabesna Road. Nabesna Road is a state maintained road, much of which is located in Wrangell-St. Elias National Park and Preserve. The road was constructed to access the Nabesna gold mine in the 1930s although the area was used traditionally by Upper Ahtna and Upper Tanana Athabascans. The road follows a historic route, also used by early homesteaders, between Upper Ahtna and Upper Tanana territory (Stratton and Georgette 1984:155). Generally, when people refer to "Nabesna," they are referring to the end of the road where the mine was located. There are a number of localities along the road that are culturally significant, including the Ahtna Athabascan family settlement of Twin Lakes in the Unit 12 portion of the road and Batzulnetas (Ahtna) in Unit 11 (Cellarius 2010, pers. comm.; Reckord 1983:146–150).

Table 2. Harvest by Community 2005-2010 (FWS 2011)

Community	Species	Issued	State	Non-Res	Hunted	Male	Female	Ukn Sex	Dayshunt
Mentasta Lake	Goat	10	10	0	9	0	0	0	41
Slana	Goat	5	5	0	0	0	0	0	0
Mentasta	no data								
Nabesna Road	no data								

Harvest by Community by year

Community	Regyear	Species	Issued	State Res	Non-Res	Hunted	Male	Female	Ukn Sex
Mentasta Lake	2010	Goat	1	1	0	0	0	0	0
	2009	Goat	2	2	0	2	0	0	0
	2007	Goat	1	1	0	1	0	0	0
	2006	Goat	2	2	0	2	0	0	0
	2005	Goat	3	3	0	3	0	0	0
FG1101	report total:		9	9	0	8	0	0	0

Community	Regyear	Species	Issued	State Res	Non-Res	Hunted	Male	Female	Ukn Sex
Slana	2010	Goat	3	3	0	0	0	0	0
	2009	Goat	1	1	0	0	0	0	0
	2007	Goat	1	1	0	0	0	0	0
	report total:		5	5	0	0	0	0	0

In her early 1980s study on subsistence in Wrangell-St. Elias National Park, Reckord described the Nabesna Road area:

> *At Slana, a dirt road parallels the Copper River and its mass of arteries for 20 miles…to the Old Nabesna Mine…Approximately 10–12 families live along the road...most live in the area year round. At least seven of the families are involved principally in the guiding business (1983:269–270).*

According to ADF&G Subsistence Division surveys conducted in 1987, there were approximately 13 households in the Nabesna Road area with an estimated population of 37 people (ADF&G 2011). The "Nabesna Road" survey unit of the 1987 study was from mile 7 of the Nabesna Road to the end of the road at the Nabesna mine site, referred to as Nabesna (McMillan and Cuccarese 1988:132). In 1987, these households harvested approximately 250 pounds of subsistence resources per person or 9,212 pounds total for the Nabesna Road study area (ADF&G 2011). No ADF&G Subsistence Division studies have been conducted on the Nabesna Road since 1987 and there is no specific census data for this area, thus it is unknown how many residents live in this area today nor is there new information on their subsistence uses. However, there will be some additional information available in the fall of 2011 after the NPS analyzes new harvest survey data.

Mentasta Lake

The proponent stated that the subsistence harvest patterns of the residents of the Tok Cutoff Road (mileposts 79–110, Mentasta Pass) and Nabesna Road (mileposts 25–46), both located in Unit 12, are

similar to those of Mentasta Lake and Slana, both located in Unit 13. For this reason, the characteristics of these two communities are reviewed here.

Not to be confused with Mentasta Pass, Mentasta Lake, also referred to as Mentasta, is a distinct community and a census designated place located in Unit 13. According to the Alaska Division of Community and Regional Affairs (DCRA) community database, the current 2010 population is approximately 112 and it is located 6 miles off the Tok Cutoff Road on the west side of Mentasta Pass. Mentasta Lake is further described as "primarily Athabascan and subsistence activities are important…the families in Mentasta Lake come from Nabesna, Suslota, Slana and other villages with the area" (DCRA 2009). According to ADF&G Subsistence Division surveys conducted in 1987, there were approximately 25 households in the Mentasta Lake area with an approximate population of 77 people (ADF&G 2011). In 1987, these households harvested approximately 125 pounds of subsistence resources per person or a total community harvest of 9,672 pounds (ADF&G 2011). Mentasta Lake is situated on the northern border between the Ahtna Athabascan (Copper Basin) communities or territory and the Upper Tanana Athabascan communities or territory (Map in Haynes and Simeone 2007:9). This border also bisects the Nabesna Road as does the border between Units 11 and 12.

Slana

Slana, according to DCRA, had a population of 107 people in 2010, "the community is comprised primarily of homesteaders…it stretches along the Nabesna Road" (to approximately mile 4) (DCRA 2010). Slana has also been described as "a dispersed community that is centered on the intersection of the Tok Cutoff and Nabesna roads (McMillan and Cuccarese 1988:142). According to ADF&G Subsistence Division surveys, conducted in 1987, there were approximately 25 households in the Slana area with an approximate population of 57 people (ADF&G 2011). In 1987, these households harvested approximately 249 pounds of subsistence resources per person or a total community harvest of 14,185 pounds (ADF&G 2011).

Eight Factors for Determining Customary and Traditional Uses

A community or area's customary and traditional use is generally exemplified through the eight factors: (1) a long-term, consistent pattern of use, excluding interruptions beyond the control of the community or area; (2) a pattern of use recurring in specific seasons for many years; (3) a pattern of use consisting of methods and means of harvest which are characterized by efficiency and economy of effort and cost, conditioned by local characteristics; (4) the consistent harvest and use of fish or wildlife as related to past methods and means of taking: near, or reasonably accessible from the community or area; (5) a means of handling, preparing, preserving, and storing fish or wildlife which has been traditionally used by past generations, including consideration of alteration of past practices due to recent technological advances, where appropriate; (6) a pattern of use which includes the handing down of knowledge of fishing and hunting skills, values, and lore from generation to generation; (7) a pattern of use in which the harvest is shared or distributed within a definable community of persons; and (8) a pattern of use which relates to reliance upon a wide diversity of fish and wildlife resources of the area and which provides substantial cultural, economic, social, and nutritional elements to the community or area.

The Board makes customary and traditional use determinations based on a holistic application of these eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)). In addition, the Board takes into consideration the reports and recommendations of any appropriate Regional Advisory Council regarding customary and traditional use of subsistence resources (50 CFR 100.16(b) and 36 CFR 242.16(b)). The Board makes customary and traditional use determinations for the sole purpose of recognizing the pool of users who generally exhibit the eight factors. The Board does not use such determinations for resource management

or restricting harvest. If a conservation concern exists for a particular population, the Board addresses that concern through the imposition of harvest limits or season restrictions rather than by limiting the customary and traditional use finding.

Specific information on each of the eight factors is not required because a community or area seeking a customary and traditional use determination only has to "generally exhibit" the eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)).

During past regulatory cycles, the Board has determined that the residents of the Tok Cutoff Road (mileposts 79–110 Mentasta Pass), and the Nabesna Road (mileposts 25–46) should have positive customary and traditional use determination for a number of species, including, but not limited to sheep, black bear, and brown bear. It logically follows that these residents' positive customary and traditional uses be recognized for goat as well, given the residents' reliance on subsistence resources and as guided by the eight factors for customary and traditional use determinations.

The Board previously determined that residents (in many communities) of Unit 11, as well as residents of several communities in Units 12 and 13 generally exhibit the eight factors for goat and thus have made positive customary and traditional use determinations for these residents. The question for this analysis is not whether there is a customary and traditional pattern of use of goat, but rather whether or not the residents of the proposal area have a pattern of use goat in Unit 11. As such, it is a question of where the use occurs, not if the use occurs. A full analysis of the eight factors has been conducted previously in the analyses for Proposals 1997-22, 1998-24 & 25, 1999-9 & 11, WP00-11, and WP01-15 among others (FSB 1997, 1998; FWS 1997a, 1997b, 1998, 1999, 2000). Customary and traditional uses were described at length for Upper Tanana Communities and Copper River Basin Communities (see FWS 1997a, Proposal 22). Thus the eight factors have been discussed in numerous analyses. The discussion of the eight factors in the analyses for Proposals 22 in 1997, 24/25 in 1998, 25/27 in 1999, WP00-11, and WP01-15 indicates that the residents of Unit 11 and 12 generally exhibit the eight factors for harvesting goat in Units 11 and the Board has recognized the customary and traditional uses of these residents for goat (FSB 1997). There is no recognized customary and traditional use determination for goat in Unit 12, as there is no resident population of goats, but there is a customary and traditional use determination for all of Unit 13 (except Unit 13D) (**Map 1**).

Some of the Board's decision for limiting customary and traditional determinations in these areas to the communities already specified was partially based on the premise that the Unit 12 boundary is not only a boundary of management units, but also a boundary between Native cultures and harvest areas. Unit 12 residents, however, are not limited to Athabascan residents. In the early 1980s, Reckord noted:

> *Subsistence resources have played a major role in the history of white people in the Copper River Valley. From the very first visit of Russian-Aleut explorers in 1848 through the gold rush and mining period at the turn of the century and into the present, subsistence resources have contributed to the diet of the residents of the valley…Over the years an indigenous white culture developed which highly valued the use of subsistence foods such as moose, caribou, sheep and fish. At first some of the white settlers learned from the Native people; they were educated by young Natives in the local species and where these species could be taken…Contrary to the belief of some observers, the use of subsistence resources by white people in the region extends beyond mere recreation (1983:166).*

Further, Reckord described the Tok Cutoff area:

> *The people living along the Tok Cutoff often live several miles from their nearest neighbors. Small settlements are found at Gakona, Chistochina, and Mentasta (Lake). The Tok Cutoff people are often oriented to businesses serving the tourists and hunters who regularly travel this route between the Copper River Valley and the Alaska Highway. Homesteaders, retired people, and guides are also found living along the road. Some of these residents have lived here for 20 or 30 years and suddenly find the area developing around them…Most of the permanent residents along the Tok Cutoff utilize a number of subsistence species each year. Most people are oriented to the highway…It is obvious when talking to the Tok Cutoff residents that it is the bush lifestyle that has brought them to this place (1983:256–257).*

There is no new information on goat harvests for the areas under consideration in the current proposal. The ADF&G harvest ticket database was searched for harvest information for the proposal area, but the database does not accurately reflect harvests for the areas of consideration in this proposal because of the difficulties in identifying location of hunter residence by mailing address. Residents in the proposal area get their mail in communities near the area, so there is no way to distinguish their harvests from others in these communities. However, harvest surveys conducted by the NPS may reveal new information (this data will be available in the fall/winter 2011).

The proponent states that the residents of the Tok Cutoff Road (mileposts 79 –110, Mentasta Pass) and Nabesna Road (mileposts 25–46) share similar subsistence patterns with the residents of Slana and Mentasta, which are both in close proximity to the proposal area (see **Map 1**). Mentasta Lake is located only 6 miles to the west of the Tok Cutoff Road. Slana is a dispersed community that is centered on the intersection of the Tok Cutoff and Nabesna roads. Slana is in Unit 13 on the border between Units 11 and 13 and close to the border of Unit 12. Mentasta Lake also is in Unit 13, but close to the border of Unit 12. The proposal area is in Unit 12. Mentasta Lake and Slana are both included in the positive customary and traditional use determinations for goat (and other species) in Unit 11 remainder (see **Map 1).** In order to engage in subsistence activities in Wrangell-St. Elias National Park, the National Park Service requires that subsistence users live within the park's resident zone (36 CFR 13.430, 36 CFR 13.1902) or have been issued a subsistence permit (36 CFR 13.440) by the park superintendent. There are 23 resident zones in Wrangell-St. Elias National Park. The Tok Cutoff Road extends between Slana and Tok, which are resident zone communities, and the Nabesna Road extends between Slana and Nabesna, which also are resident zone communities. A designation by the National Park Service as a resident zone community indicates that the residents in these communities are recognized as having customary and traditional uses of the Wrangell-St. Elias National Park. Thus, the National Park Service recognizes Slana and Mentasta as resident zone communities and these communities are also including in the customary and traditional use determination for goat for all of Unit 11. The people living in the proposal area in close proximity to Slana and Mentasta Lake should not be excluded from being eligible to hunt in the same areas that Slana and Mentasta Lake hunt in just because they live along a road and not in Slana or Mentasta Lake. Therefore, the residents of the proposal area should have the same customary and traditional use determinations as Slana and Mentasta. Finally, because positive customary and traditional use determinations have been added for these same communities for other species, it follows that goat should also be included along the same rationale.

Effects of the Proposal

If this proposal is adopted, the Unit 12 residents of the Tok Cutoff Road (mileposts 79 –110, Mentasta Pass), and the Nabesna Road (mileposts 25–46) would be able to hunt goat in Unit 11, similar to the communities closest to their area of residence, Mentasta Lake and Slana. Residents of the proposal area would still have to comply with National Park Service regulations for engaging in subsistence activities

in Wrangell-St. Elias National Park, which requires that subsistence users live within the Park's resident zone or have been issued a subsistence permit (13.440 permit) by the park superintendent.

If this proposal is adopted, there would be minimal effects on nonsubsistence users because goat hunting in Unit 11 includes National Preserve lands where nonrural residents may hunt under State of Alaska regulations.

If this proposal is adopted, no effects on goat populations are anticipated as it is not expected that goat harvests would increase substantially. There are approximately 25 households estimated to be in the areas under consideration (Cellarius pers. comm. 2011).

If this proposal is not adopted, the Unit 12 residents of the Tok Cutoff Road (mileposts 79 –110, Mentasta Pass), and the Nabesna Road (mileposts 25–46) would not be able to harvest goat in Unit 11 that is Park land, however, they could request from the Board individual customary and traditional use determinations for goat in this area.

If this proposal is not adopted, the residents of the proposal area would continue to be ineligible to harvest goat in Unit 11 under Federal subsistence management regulations. The residents of the proposal area would continue to be able to hunt on Preserve Lands in Unit 11 under general State hunting regulations.

OSM PRELIMINARY CONCLUSION

Support Proposal WP11-27.

Justification

The residents of the Tok Cutoff Road (mileposts 79 –110, Mentasta Pass) and Nabesna Road (mileposts 25–46) may have been inadvertently excluded during in the previous customary and traditional use determinations for goat as the determinations were reviewed by community, not household. These areas are not within any specific community. The proponent states that the residents of the proposal area have subsistence use patterns more similar to those of Slana and Mentasta, which are in close proximity to the proposal area. While there is little available information on the use of goats by residents of the proposal area, the use by residents of Slana and Mentasta, generally exhibit the eight factors for harvesting goat in Unit 11. Residents of Slana and Mentasta have positive customary and traditional use determinations for goat in Unit 11. Consideration should be given to include the people living along a road close to a community in the customary and traditional use determinations of the closest community or communities. The customary and traditional uses of the residents of the Tok Cutoff Road and Nabesna Road also have been recognized by the Federal Subsistence Board for black and brown bear, sheep, and wolf in Unit 11 and caribou and moose in Unit 11 north of the Sanford River. Recognizing the customary and traditional uses for goat in Unit 11 by the residents of the Tok Cutoff Road (mileposts 79 –110, Mentasta Pass) and Nabesna Road (mileposts 25–46) would make the customary and traditional use determinations for goat more consistent with customary and traditional determinations for other wildlife in Unit 11.

LITERATURE CITED

ADF&G. 2011. Community Subsistence Information System. Division of Subsistence. http://www.adfg.alaska.gov/sb/CSIS/. Retrieved May 25, 2011.

Cellarius, B. 2010. Subsistence Coordinator, Wrangell St. Elias National Park and Preserve. Phone conversation, email. National Park Service. Copper Center, AK.

Cellarius, B. 2011. Subsistence Coordinator, Wrangell St. Elias National Park and Preserve. Phone conversation. National Park Service. Copper Center, AK.

Coltrane, J. 2008. Units 13D and 14 mountain goat management report. Pages 139–159 *in* P. Harper, editor. Mountain goat management report of survey and inventory activities 1 July 2005–30 June 2007. Alaska Department of Fish and Game. Project 12.0. Juneau, AK.

Cote, S. D., and M. Festa-Bianchet. 2003. Mountain goat. Pages 1061–1075 *in* G. A. Feldhamer, B. C. Thompson, and J. A. Chapman, editors. Wild mammals of North America: biology, management and conservation. Second edition. John Hopkins University Press, Baltimore, MD.

DCRA. 2011. Division of Community and Regional Affairs, Community Database Online. http://www.commerce.state.ak.us/dca/ commdb/CF. Retrieved May 25, 2011.

EISRAC. 1998. Transcripts of the Eastern Interior Subsistence Regional Advisory Council proceedings, February 5, 1997 in Tanana, Alaska. Office of Subsistence Management, FWS. Anchorage, AK.

EISRAC. 2009. Transcripts of the Eastern Interior Subsistence Regional Advisory Council proceedings, October 13, 2009. Ft. Yukon, Alaska. Office of Subsistence Management, FWS. Anchorage, AK.

Haynes, T. and W. Simeone. 2007. Upper Tanana Ethnographic Overview and Assessment, Wrangell St. Elias National Park and Preserve. ADF&G, Division of Subsistence Technical Paper No. 325. Juneau, AK.

FSB 1998. Transcripts of the Federal Subsistence Board proceedings, May 6, 1998. Office of Subsistence Management, FWS. Anchorage AK.

FSB 1997. Transcripts of the Federal Subsistence Board proceedings, April 7, 1997. Office of Subsistence Management, FWS. Anchorage AK.

FWS 2011. Harvest data by community. Office of Subsistence Management, microcomputer database. Accessed August 2011.

FWS 2010. Staff Analysis WP10-29 & 30. In Federal Subsistence Board meeting materials, Anchorage, AK.

FWS 2000. Staff Analysis 00-30 (Proposal 15). Pages 42-51. In Federal Subsistence Board meeting materials. May 2-4, 2000. Anchorage, AK.

FWS 1999. Staff Analysis WP99-27 and WP98-70. Pages 272-294. In Federal Subsistence Board meeting materials, May 3-5, 1999. Office of Subsistence Management, FWS. Anchorage, AK.

FWS. 1998. Staff Analysis RFR R97-07, WP98-053, WP98-070. Pages 75-80, 84-94. In Federal Subsistence Board meeting materials, May 4-8, 1998. Office of Subsistence Management, FWS. Anchorage, AK.

FWS 1997a. Staff Analysis Proposal 22. Pages 36-54. In Federal Subsistence Board meeting materials. April 7-11, 1997. Office of Subsistence Management, FWS. Anchorage, AK.

FWS. 1997b. Staff Analysis Proposals 17- 36. Pages 36-261. In Federal Subsistence Board meeting materials, April 29-May 3, 1996. Office of Subsistence Management, FWS. Anchorage, AK.

FWS. 1996. Staff Analysis WP96-19. Pages 41-61. In Federal Subsistence Board meeting materials, April 29-May 3, 1996. Office of Subsistence Management, FWS. Anchorage, AK.

McMillan, P. and S. Cuccarese. 1988. Alaska Over-the Horizon backscatter Radar System: Characteristics of Contemporary Subsistence Use Patterns in the Copper River Basin and Upper Tanana Area. Volume 1. Arctic Environmental Information and Data Center. Anchorage, AK.

National Park Service. 1995. Customary and traditional use reference for the Copper River Basin Area. Reference prepared for the Federal Subsistence Board. Anchorage, AK.

National Park Service. 1994. Final Report on Upper Tanana Region Customary and Traditional Use Eligibility. Reference prepared for the Federal Subsistence Board. Anchorage, AK.

Office of Subsistence Management. 2008. Subsistence Management Regulations for the Harvest of Wildlife on Federal Public Lands in Alaska July 1, 2008-June 20, 2010. FWS. Anchorage, AK.

Reckord, H. 1983. That's the Way We Live, Subsistence in the Wrangell St. Elias National Park and Preserve. Anthropology and Historic Preservation Cooperative Park Studies Unit. University of Alaska, Fairbanks. Occasional Paper No. 34. Fairbanks, AK.

Stratton, Lee and Susan Georgette. 1984. The Use of Fish and Game by Communities in the Copper River Basin, Alaska: A Report on a 1983 Household Survey. ADF&G Division of Subsistence, Technical Paper No. 107. Anchorage, Alaska.

Tobey, R. W. 2008. Unit 11 mountain goat management report. Pages 130–138 *in* P. Harper, editor. Mountain goat management report of survey and inventory activities 1 July 2005–30 June 2007. Alaska Department of Fish and Game. Project 12.0. Juneau, Alaska.

U.S. Census. 2000. State and county quick facts. http://quickfacts.census. gov/qfd/. Retrieved: May 2011.

U.S. Census. 2000. Geographic Comparison Table. http://factfinder.census.gov/servlet/GCTTable?_bm=n&_lang=en&mt_name=DEC_2000_PL_U_GCTPL_ST7&format=ST-7&_box_head_nbr=GCT-PL&ds_name=DEC_2000_PL_U&geo_id=04000US02. Retrieved June 2011.

USFWS. 2011. Harvest database. Microcomputer database. Office of Subsistence Management, USFWS. Anchorage, AK.

ADF&G Comments on WP12-27
August 26, 2011; Page 1 of 1

Alaska Department of Fish and Game
Comments to Regional Advisory Council

Wildlife Proposal WP12-27 (GMU 11 C&T Goats): This proposal was submitted by the Upper Tanana Fortymile.proposal would establish a positive Federal Customary and Traditional Use determination for mountain goats in Unit 11 for the residents of the Tok Cutoff Road (mileposts 79-110 Mentasta Pass) and Nabesna Road (mileposts 25-46).

Introduction: This proposalseeks a positive customary and traditional use determination for the residents of Tok Cutoff Road (mileposts 79 -110, Mentasta Pass) and Nabesna Road (mileposts 25-46). Customary and traditional uses of these residents have already been recognized by the Federal Subsistence Board for black and brown bear, sheep, and wolf in Unit 11 and caribou and moose in Unit 11 north of the Sanford River.

Impact on Subsistence Users: If adopted, federal subsistence users who reside within the identified area will be granted opportunity to harvest in the federal subsistence goat hunt in Unit 11.

Opportunity Provided by State: The State provides a resident and nonresident goat hunt in Unit 11 from September 1 through November 30 with a bag limit of one goat by registration permit. Harvests are low, averaging only 11 goats per year (range = e.g.4 – 17) between 2001 and 2010. Local residents averaged < 1 goat per year (range = e.g. 0-2). Much of GMU 11 remains lightly hunted for goats because of difficult access and the limited availability of goats in the Wrangell Mountains..

Other Comments: The Nebesna residents proposing this change purport that they were originally omitted from the previous Customary and Traditional finding by accident. This is the first time this question has been posed before the board.

Recommendation: Support

WP12-28 Executive Summary	
General Description	Proposal WP12-28 requests a change under Special Provisions to allow the take of one moose, rather than one bull moose, from Federal public lands in Units 6B or 6C for the annual Memorial/ Sobriety Day Potlatch. *Submitted by the Native Village of Eyak*
Proposed Regulation	**Special Provision—Unit 6B or 6C** *One permit will be issued by the Cordova District Ranger to the Native Village of Eyak to take one ~~bull~~ moose from Federal public lands in Unit 6B or 6C for their annual Memorial/Sobriety Day potlatch.*
OSM Preliminary Conclusion	**Support**
Southcentral Regional Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP12-28

ISSUES

Proposal WP12-28, submitted by the Native Village of Eyak, requests a change under Special Provisions to allow the take of one moose, rather than one bull moose, from Federal public lands in Units 6B or 6C for the annual Memorial/Sobriety Day Potlatch.

DISCUSSION

The proponent, noting that locating a bull moose for Memorial/Sobriety Day Potlatch harvest is becoming difficult, makes the following observations in the proposal in support of the proposed regulatory change.

> In 2009 and 2010 it became increasingly difficult to locate a bull moose for harvest. In 2010 in particular, the designated hunter spent hundreds of hours in effort trying to locate a bull, while passing up on numerous potential opportunities to harvest a cow. The Tribe was concerned that a moose could not be harvested in time for the annual Potlatch, and in fact the final harvest only took place a matter of days before the event. The Cordova District Wildlife Biologist indicated at the time that there would be no conservation concern in changing the permit to allow harvest of a cow moose, but this potential did not exist in regulation. While it is the intent of the Tribe to harvest only bull moose whenever possible, we would like to be able to reserve the option of cow harvest as a contingency in the event no bull can be located in time for the Potlatch.

The Cordova District Subsistence Biologist states that there are no conservation concerns with one moose of either sex harvested from Federal public lands in Units 6B or 6C. On the contrary, given current low bull/cow ratios, a cow harvest might take some pressure off of the bull moose population (Burcham 2011, pers. comm.).

Existing Federal Regulation

> **Special Provision—Unit 6B or 6C**
>
> *One permit will be issued by the Cordova District Ranger to the Native Village of Eyak to take one bull moose from Federal public lands in Unit 6B or 6C for their annual Memorial/Sobriety Day potlatch.*

Proposed Federal Regulation

> **Special Provision—Unit 6B or 6C**
>
> *One permit will be issued by the Cordova District Ranger to the Native Village of Eyak to take one ~~bull~~ moose from Federal public lands in Unit 6B or 6C for their annual Memorial/Sobriety Day potlatch.*

Extent of Federal Public Lands

Federal public lands comprise approximately 82% of Unit 6B and include lands managed by the Chugach National Forest (90%), Bureau of Land Management (10%), and Wrangell-St.Elias National Park and Preserve (.1%). Federal public lands comprise approximately 64% of Unit 6C and 100% of the lands are managed by the Chugach National Forest.

Customary and Traditional Use Determination

All rural resident of Units 6A, 6B, and 6C have a positive customary and traditional use determination to harvest moose in Unit 6B and 6C.

Regulatory History

The Federal Subsistence Board adopted the current regulation at its May 2, 2000 meeting. Briefly, the Board recognized a customary and traditional use of moose for the Memorial/Sobriety Day potlatch, and concurred with the summary statement of Interagency Staff:

> The Native Village of Eyak's memorial sobriety potlatch is an annual reoccurring event, which the Board has endorsed by previous special actions. This would make it — this would put it into the annual regulatory process whereby it would stand unless modified. Taking of one bull moose for ceremonial purposes will not significantly impact the moose population. And another persuasive piece of testimony that was provided at the Council meeting by one of the members is that these potlatches are attended, not only by the local residents, but by a cross-section of communities in Prince William Sound, which in our minds further legitimizes the event (FSB 2000:39).

Note that State regulations 5 AAC 92.019 allow the taking of big game for certain religious ceremonies. Under this regulation permits were issued to the Alaska Federation of Natives in 2010 for a memorial potlatch. Federally qualified subsistence users may wish to pursue this option for memorial potlatches.

Effect of the Proposal

Harvesting one moose of either sex is not anticipated to have any effects on the moose population in Units 6B or 6C. Providing more certainty that a moose would be harvested for the Memorial/Sobriety Day Potlatch would be benefit Federally qualified subsistence users. No effects are anticipated on non-Federally qualified users.

OSM PRELIMINARY CONCLUSION

Support Proposal WP12-28.

Justification

Adopting this proposal would provide a higher likelihood that a moose would be harvested for the Memorial/Sobriety Day Potlatch, and is not anticipated to have any effects on the moose population in Units 6B or 6C.

LITERATURE CITED

Burcham, M. 2011. Cordova District Ranger. Personal communication: phone. US Forest Service. Cordova, AK.

FSB. 2000. Transcripts of the Federal Subsistence Board proceedings, May 2, 2000. Office of Subsistence Management, FWS. Anchorage, AK.

WP12-29 Executive Summary	
General Description	Proposal WP12-29 requests a season to be established for moose in Unit 7 for that portion draining into Kings Bay with a season from August 10 – September 20 by Federal registration permit. The Seward District Ranger will close the Federal season when the quota, to be determined, is reached. *Submitted by the Southcentral Subsistence Regional Advisory Council*
Proposed Regulation	**Unit 7, that portion draining into Kings Bay** ~~*Federal public lands are closed to the harvest of moose*~~. ~~*No Federal open season*~~ ***1 moose by Federal registration permit only. The Seward District Ranger will close the Federal season when the quota is reached.*** ***Aug. 10– Sept. 20***
OSM Preliminary Conclusion	**Oppose**
Southcentral Regional Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP12-29

ISSUES

Proposal WP12-29, submitted by the Southcentral Subsistence Regional Advisory Council requests a season to be established for moose in Unit 7 for that portion draining into Kings Bay with a season from August 10 – September 20 by Federal registration permit. The Seward District Ranger will close the Federal season when the quota, to be determined, is reached.

DISCUSSION

The proponent requests that a Federal season be opened for moose in Unit 7 for that portion draining into Kings Bay to give an opportunity to Federally qualified subsistence users to harvest moose and to discourage poaching. The proponent states that having an opportunity to harvest moose would create interest in the stewardship of the moose population within the community of eligible users and would lead to the support of good management practices. General hunt State regulations apply to non-Federal lands in the vicinity of Nellie Juan Lake, with a harvest limit of one bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side.

Existing Federal Regulation

Unit 7, that portion draining into Kings Bay	
Federal public lands are closed to the harvest of moose.	*No Federal open season*

Proposed Federal Regulation

Unit 7, that portion draining into Kings Bay	
~~*Federal public lands are closed to the harvest of moose*~~***.*** ***1 moose by Federal registration permit only. The Seward District Ranger will close the Federal season when the quota is reached.***	~~*No Federal open season*~~ ***Aug. 10– Sept. 20***

Existing State Regulation

Unit 7 remainder	
Residents and Nonresidents: One bull with spike-fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side.	Aug. 20 – Sept. 20

Extent of Federal Public Lands

Federal public lands for this portion of King's Bay consist solely of Chugach National Forest, administered by the U.S. Forest Service. Federal public lands are currently not open to moose harvest by any user **(See Unit 7 Map).**

Customary and Traditional Use Determinations

Residents of Chenega Bay, Tatitlek, Cooper Landing, and Hope have a customary and traditional use determination for moose in that portion of Unit 7 draining into Kings Bay.

Regulatory History

Proposal 18B (C&T 1997) and Proposal 21 (1997) – requested a positive customary and traditional use determination and a moose season for residents of Chenega Bay and Tatitlek. Proposal 21 did not request a Federal closure, but requested a new hunt open only to Federally qualified subsistence users. The harvest limit was two moose per community, which could be taken in the Kings Bay (**Map 1**), during a Sept. 1–Dec. 31 season. The intent of Proposal 21 was to create a four-month season and harvest limit for moose in the affected area. At its April 1997 meeting, the Federal Subsistence Board adopted Proposal P21 with modification to create a season from Aug. 10 – Sept. 20 for residents of Chenega Bay and Tatitlek, with a closure to all other users.

Special Action WSA01-02, submitted by the Chugach National Forest, U.S. Forest Service, requested that the Kings Bay moose harvest in Unit 7 scheduled for Aug. 10–Sept. 20, 2001, be closed. This Special Action was adopted by the Board. The Board determined that the moose population was too small to support a harvest. The Special Action lasted for one regulatory year without a proposal to continue the closure, therefore, the original Aug. 10 – Sept. 20 season was re-opened.

Wildlife Closure Review 05-03 found the moose population to be at a low density and no indication that there were any increases in the population to justify harvest except by qualified federal subsistence users.

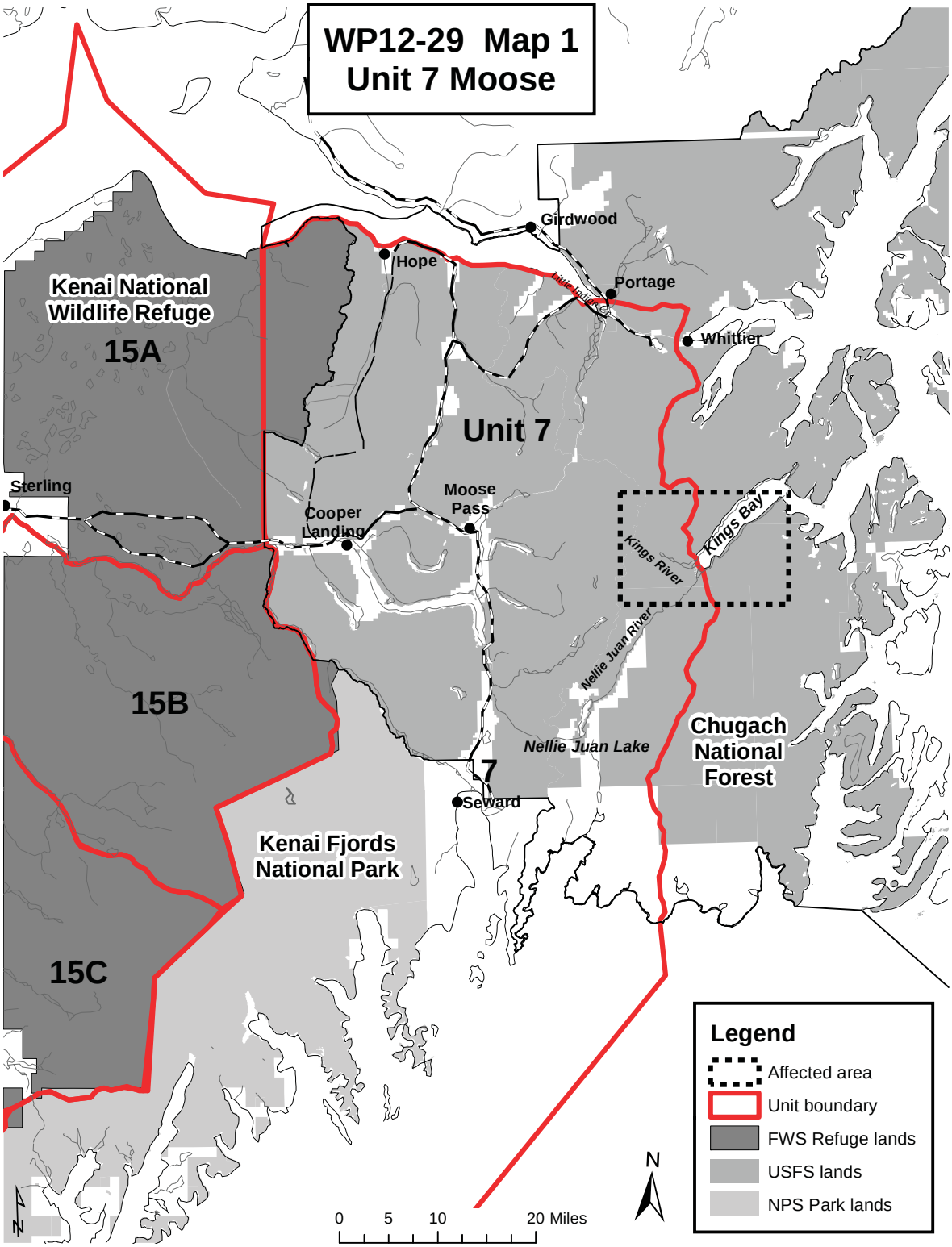
In 2006, Proposal WP06-16 requested a season extension and harvest limit expansion. At the Mar. 14–16, 2006 Southcentral Alaska Subsistence Regional Advisory Council meeting, the Council discussed changing the Kings Bay moose harvest limit, harvest season, and removing the Federal closure. The Council voted to support WP06-16 with modifications to: Remove the antler restrictions, but retain the bull harvest; add a permit with a seven-day reporting requirement; change the harvest dates to Sept. 1–Dec. 31; and retain the Federal closure. The proponent from Chenega Bay stated they had never been confined to harvest dates before Sept. 20, primarily because that time of year (in the early season) the moose are rarely (if at all) harvestable as the snow has not yet pushed them down from their upper topography habitat that they normally occupy in the early fall. The proponent stated the historical moose harvests by Prince William Sound rural residents in the Kings Bay drainages did not take place until later into the winter months. The Council suggested the season change to accommodate a winter harvest, but added the permit requirements of 1 bull harvest and the Federal closure because the Council was concerned about the small population of moose in the area. However because of conservation concerns, the Interagency Staff Council recommended the opposition of the proposal contrary to the recommendation of the Southcentral Alaska Regional Advisory Council. Subsequently, the Federal Subsistence Board closed Federal lands to the hunting of moose by all users at its May 2006 meeting.

Management Direction

Currently, there are no management objectives for this moose population.

Biological Background

The amount of moose habitat in the Kings Bay area is very small, and consists of narrow riparian areas along the Kings River and Nellie Juan River. An aerial survey conducted by ADF&G on January 8, 1997,


WP12-29 Map 1
Unit 7 Moose
Girdwood
Hope
Portage
Whittier
Kenai National
Wildlife Refuge
15A
Unit 7
Sterling
Moose
Pass
Cooper
Landing
Kings Bay
Kings River
Nellie Juan River
15B
Nellie Juan Lake
Chugach
National
Forest
7
Seward
Kenai Fjords
National Park
15C
Legend
Affected area
Unit boundary
FWS Refuge lands
USFS lands
NPS Park lands
N
0 5 10 20 Miles

revealed 20 moose in the area. The herd consisted of 8 bulls, 10 cows, and 2 calves. Counting conditions were good, with heavy snow cover and excellent visibility.

The entire drainages of the Nellie Juan and Kings Rivers were flown in March 2001 by the ADF&G, from Nellie Juan Lake downstream to the head of Kings Bay and up the Kings River to the glacier country in which it rises. Nine moose were counted during the survey in conditions characterized as being excellent for aerial surveying (Spraker 2001, OSM 2005).

The small area of moose habitat at Kings Bay is isolated–with only one accessible route for moose to enter the area across the mountains from the Paradise Lakes or Nellie Juan Lake areas and then down the Nellie Juan River–a distance of 15 to 20 miles over difficult terrain. Interchange of moose with other areas is therefore likely minimal. The fact that only nine moose were observed is significant. Black bear have high densities in western Prince William Sound (Crowley 2002) and brown bears are regularly present in the Kings Bay area. These two predators may elevate the importance of safe calving habitat, which appears to be limited. Productivity and viability of this small group of moose, therefore, is marginal. Their restricted use area makes the remaining herd vulnerable to hunters who walk up the river valley or use authorized motorized access.

A moose index survey was flown on March 27, 2006 that was funded by the U.S. Forest Service and conducted by ADF&G Personnel, using the standard ADF&G moose survey protocol. The conditions were generally good for counting. Extra time was spent following moose tracks to try to obtain a better observation of the total moose numbers (Zemke 2006 pers. comm.). A total of five moose were observed. Four cows were observed, two were seen south of the Nellie Juan River confluence with Kings Bay and two were seen in the area between the Nellie Juan River and Kings River (Zemke 2006 pers. comm.). One bull moose was observed upstream in the Kings River watershed (Zemke 2006 pers. comm.). No calves were observed in the area. Most of the tracks were observed within ½ mile of the shoreline. The surveyors believed that this was not the total number of moose in this heavily timbered steep country, and could not be sure the total number of moose missed, however it could be as high as 25 to 50 percent of the total moose numbers. The surveyors were relatively certain there were a very limited number of moose in the area during this period. The number of moose in this area in the fall would be hard to predict from this late spring survey. Moose may transition out of the area before heavy winter snowfall.

Harvest History

Harvest data indicate that no moose were harvested from this area from 1997–2000 (ADF&G 2000). As of 2001, some hunting had occurred from the village of Tatitlek, with no success (Vlasoff 2001, OSM 2005). The hunters of Chenega Bay informally discussed this hunt on May 5, 2001, concluding that they knew of no one from the Chenega Bay that had hunted the Kings Bay herd in recent years (Robertson 2001, OSM 2005).

According to the recollections of several hunters from Chenega Bay or Tatitlek, Kings Bay has been used for moose hunting by residents of these two villages at least since the 1960s. Moose harvests have taken place incidental to commercial fishing, seal hunting, or goat hunting. ADF&G Division of Subsistence studies of the old village of Chenega in the 1960s and the re-established village of Chenega Bay in the 1980s (Stratton and Chisum 1986); and of Tatitlek in the 1980s (Stratton 1990) also report that while moose harvests were not common, Kings Bay was the moose hunting location used by these villages.

The general hunt under State regulations was closed on Federal public lands in the Kings Bay drainage in 1997 by the establishment of exclusive Federal subsistence management regulations for the area. The State's general hunt regulations apply to non-Federal lands in the vicinity of Nellie Juan Lake, with a

harvest limit of one bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side. The landowner (Chugach Corporation), however, has restricted access to the area. According to the corporation's permit specialist, no trespass permits for hunting have been issued by the corporation since 1997.

For years 2000–2008, 0–2 moose have been reported harvested each year under State regulations within the Nellie Juan River drainage area (Unit 7 remainder) which is near the Kings River drainage for a total of five moose. The 2000–2008 moose harvest was by non-Federally qualified users and the affected area is typically accessed by aircraft.

Other Alternatives Considered

An analysis based on Section 804 of ANILCA shall be conducted whenever a proposal to change Federal regulations requests a prioritization for use of a subsistence resource among rural residents having customary and traditional use of that resource. Modifying the proposal to allow the harvest of one bull moose per community with customary and traditional determination could still result in a conservation concern. Residents of Cooper Landing, Hope, Chenega and Tatitlek have customary and traditional use determination and allowing one bull moose per community could result in four bulls being harvested within this small population.

Effects of the Proposal

If Proposal WP12-29 were adopted, it would establish a harvest season from Aug. 10 – Sept. 20 for the harvest of any moose. The Seward District Ranger of the Chugach National Forest would establish a quota have the authority to close the Federal season once the quota is reached. Establishing a season may have detrimental effects on the moose population since there are four communities that have a positive and customary use determination for moose in this portion of Unit 7. If the season is allowed, Federally qualified individuals would be eligible to harvest a moose, which could lead to over harvest of this small herd.

Allowing the possibility of cow harvest in such a small population could also have detrimental effects on the health of the moose population. Cows are important to maintain the herd. If a cow is harvested, it will reduce the potential for recruitment of new moose into the population and thus have a negative impact on the small herd.

OSM PRELIMINARY CONCLUSION

Oppose Proposal WP12-29

Justification

There is little information on the current status of the affected moose population. Based on 1997, 2001, and 2006 survey results, the moose population has been at a low density and there are no indications that there have been any increases in the moose population to justify subsistence or non-subsistence harvest. Interchange of moose with other areas is likely minimal due to difficult terrain. If the season is allowed and individuals from the four Federally qualified communities are eligible to harvest a moose, this could lead to over harvest of this small herd and would violate sound principles of wildlife management (ANILCA, Title VIII, § 802(1)), and potentially result in the extirpation of the population. Therefore, continuation of the closure to all users is likely necessary for continued viability of this wildlife population (§ 816(b)).

LITERATURE CITED

ADF&G. 2010. Harvest ticket database. Microcomputer database, updated May 2010.

Crowley, D. 2002. Black bear management report. Game Management Unit 6. Pages 123–140 *in* Carol Healy, ed. Black bear management report of survey-inventory activities, 1 July 1998–30 June 2001. ADF&G Div. of Wildl. Cons., Juneau, AK.

FSB. 1997. Transcripts of the Federal Subsistence Board proceedings, April 8, 1997. Anchorage, AK.

OSM. 2005. Staff Analysis WCR05-03. Office of the Subsistence Management, FWS. Anchorage, AK.

Robertson, C., 2001. Chenega Bay, AK. Wildlife Closure Review 05-03.

Spraker, T., 2001. Wildlife Biologist. ADF&G, Soldotna, AK. Wildlife Closure Review 05-03.

Stratton, T. 1990. Resource harvest and use in Tatilek, Alaska, ADF&G Div. of Subsistence Tech. Paper No. 181.

Stratton, L. and E.B. Chisum. 1986. Resource use patterns in Chenega, western Prince William Sound: Chenega in the 1960s and Chenega Bay 1984–1986. ADF&G Div. of Subsistence Tech. Paper No. 139.

Vlasoff, K., 2001. Southcentral Regional Advisory Council, Tatitlek, AK. Personal Communication.

Zemke, S., 2006. CNF EVOS Liaison/Subsistence Coordinator. Personal communication. USDA Forest Service, Girdwood, AK.

WP12-30/31 Executive Summary	
General Description	Proposal WP12-30 requests that the moose harvest limits in Units 7-remainder, 15A-remainder, 15B and 15C be revised from 1 antlered bull with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler to 1 antlered bull with 50-inch antlers or 3 or more brow tines on either antler. The proposal also requests that the Federal season dates be changed from Aug. 10 – Sept. 20 to Aug. 22 – Sept. 20, and that antlers of moose harvested in Units 7 remainder, 15A remainder, 15B and 15C be inspected and sealed by an ADF&G representative. Additionally the proposal requests that no Federal permits be issued during the Oct. 20 – Nov.10 season. *Submitted by the Alaska Department of Fish and Game* Proposal WP12-31 requests that the moose harvest limits in Units 15A-remainder, 15B and 15C be revised from 1 antlered bull with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler to 1 antlered bull with a spike on either side or 50-inch antlers or 3 or more brow tines. The proposal also requests that the Federal season dates be changed from Aug. 10 – Sept. 20 to Aug. 20 – Sept. 20 and that antlers of moose harvested in 15A remainder, 15B and 15C be inspected and sealed by an ADF&G representative. Additionally the proposal requests that the Kenai National Wildlife Refuge (NWR) Manager be authorized to close or restrict the Aug. 20 – Sept. 20 season based on conservation concerns, in consultation with ADF&G and the Chair of the Southcentral Regional Advisory Council. The proposal also requests that the moose harvest limits for the late season hunt in Units 15B and 15C be changed from 1 antlered bull with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler to 1 antlered bull with a spike on either side or 50-inch antlers or 3 or more brow tines. Finally, the proposal requests that the late season dates be changed from Oct. 20 – Nov. 10 to Oct. 20 – Oct. 31. *Submitted by the Kenai National Wildlife Refuge*
Proposed Regulation	Proposal WP12-30 **Unit 7 remainder, Unit 15A remainder, 15B and 15C Moose** *1 antlered bull with ~~spike-fork or~~ 50-inch antlers or with 3 or more brow tines on either antler, by Federal registration permit only.* ***Antlers will be required to be inspected and sealed by an ADF&G representative.*** — *~~Aug 10~~* ***Aug. 22****– Sept. 20*

continued on next page

WP12-30/31 Executive Summary *(continued)*		
	Proposal WP12-31	
	Unit 15A remainder, 15B and 15C Moose	
Proposed Regulation (Continued)	*1 antlered bull with ~~spike-fork or~~* ***a spike antler on either side,*** *or 50-inch antlers or with 3 or more brow tines on either antler, by Federal registration permit only.* ***Antlers will be required to be inspected and sealed by an ADF&G representative. The Kenai National Wildlife Refuge Manager is authorized to close or restrict the Aug. 20 – Sept 20 season based on conservation concerns, in consultation with ADF&G and the Chair of the Southcentral Regional Advisory Council.***	*~~Aug. 10~~* ***Aug. 20–*** *Sept. 20*
	1 antlered bull with ~~spike-fork or~~ a spike antler on either side, *or 50-inch antlers or with 3 or more brow tines on either antler, by Federal registration permit only.* ***Antlers will be required to be inspected and sealed by an ADF&G representative.*** *The Kenai National Wildlife Refuge Manager is authorized to close the Oct./Nov. season based on conservation concerns, in consultation with ADF&G and the Chair of the Southcentral Regional Advisory Council*	*Oct. 20 – ~~Nov. 10~~* ***Oct. 31***
OSM Preliminary Conclusion	**Unit 7 remainder—Moose**	
	*1 antlered bull with ~~spike-fork or~~ 50-inch antlers or with ~~3~~**4** or more brow tines on either antler, by Federal registration permit only.* ***Antlers must be inspected and sealed by an authorized representative.***	*Aug. 10 – Sept. 20*
	Unit 15A remainder, 15B and 15C—Moose	
	*1 antlered bull with ~~spike-fork or~~ 50-inch antlers or with ~~3~~**4** or more brow tines on either antler, by Federal registration permit only.* ***Antlers must be inspected and sealed by an authorized representative.***	*Aug. 10 – Sept. 20*

continued on next page

WP12-30/31 Executive Summary *(continued)*	
OSM Preliminary Conclusion (Continued)	**Units 15B and 15C—Moose** *1 antlered bull with ~~spike-fork or~~ 50-inch antlers or with ~~3~~**4** or more brow tines on either antler, by Federal registration permit only.* ***Antlers must be inspected and sealed by an authorized representative.*** *The Kenai National Wildlife Refuge Manager is authorized to close the Oct./Nov. season based on conservation concerns, in consultation with ADF&G and the Chair of the Southcentral Regional Advisory Council.* — *Oct. 20–Nov. 10*
Southcentral Regional Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP12-30 AND WP12-31

ISSUES

Proposal WP12-30, submitted by the Alaska Department of Fish and Game, requests that the moose harvest limits in Units 7-remainder, 15A-remainder, 15B and 15C be revised from 1 antlered bull with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler to 1 antlered bull with 50-inch antlers or 3 or more brow tines on either antler. The proposal also requests that the Federal season dates be changed from Aug. 10 – Sept. 20 to Aug. 22 – Sept. 20, and that antlers of moose harvested in Units 7 remainder, 15A remainder, 15B and 15C be inspected and sealed by an ADF&G representative. Additionally the proposal requests that no Federal permits be issued during the Oct. 20 – Nov.10 season.

Proposal WP12-31, submitted by the Kenai National Wildlife Refuge, requests that the moose harvest limits in Units 15A-remainder, 15B and 15C be revised from 1 antlered bull with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler to 1 antlered bull with a spike on either side or 50-inch antlers or 3 or more brow tines. The proposal also requests that the Federal season dates be changed from Aug. 10 – Sept. 20 to Aug. 20 – Sept. 20 and that antlers of moose harvested in 15A remainder, 15B and 15C be inspected and sealed by an ADF&G representative. Additionally the proposal requests that the Kenai National Wildlife Refuge (NWR) Manager be authorized to close or restrict the Aug. 20 – Sept. 20 season based on conservation concerns, in consultation with ADF&G and the Chair of the Southcentral Regional Advisory Council. The proposal also requests that the moose harvest limits for the late season hunt in Units 15B and 15C be changed from 1 antlered bull with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler to 1 antlered bull with a spike on either side or 50-inch antlers or 3 or more brow tines. Finally, the proposal requests that the late season dates be changed from Oct. 20 – Nov. 10 to Oct. 20 – Oct. 31.

DISCUSSION

The proponents state that recent moose composition surveys indicate there are conservation concerns for the moose population in Unit 15. The bull: cow ratios (in portions of the area) are low (9 bulls:100 cows) and declining; if not corrected this could lead to low productivity and potentially severe moose population declines on the Kenai Peninsula. Imposing antler restrictions would likely reduce the harvest of bulls, which should help to address these conservation concerns. In March 2011, the Alaska Board of Game (BOG) adopted similar antler restrictions; without similar action in Federal regulations any conservation gains may be compromised as the majority of land in Units 7 and 15 are Federal public lands. Sealing the antlers within 10 days of harvest will allow for more accurate tracking of harvest of legal moose.

Because Federal wildlife proposals were due before the BOG took action on a similar proposal in March 2011, Proposal WP12-31 was submitted as a placeholder. Subsequent to its submission, new data became available that raised additional concerns about the bull:cow ratio in certain areas of the Kenai Peninsula, particularly in portions of Unit 15. In trying to come up with a solution for addressing these conservation concerns, the proponent concluded that aligning 2011 Federal regulations with new State regulations would be the most effective way to increase bull:cow ratios in the short term. The proponent submitted a Wildlife Special Action (WSA 11-02) to do so for the early fall season; the Federal Subsistence Board (Board) adopted this Special Action on July 19, 2011.

While the proponent supports modifying Proposal WP12-31 to align with the recently-adopted State regulations, the goal is to have it remain in effect only through the 2012 season. Depending on the

moose population status and harvest reports from the 2011 season, a temporary special action could be submitted for the 2012 or the 2013 hunting seasons. In coordination with ADF&G, the proponent plans to expand annual aerial survey efforts in order to document moose population composition in response to the proposed regulatory change. Beyond 2012, there will be a need to reassess the information available to determine the best way to implement a longer-term harvest management framework designed to meet conservation objectives for Kenai Peninsula moose populations while allowing for a broader range of harvest opportunities for both subsistence and recreational users.

Existing Federal Regulations

Unit 7 remainder—Moose	
1 antlered bull with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler, by Federal registration permit only.	*Aug. 10 – Sept. 20*
Unit 15A remainder, 15B and 15C—Moose	
1 antlered bull with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler, by Federal registration permit only.	*Aug. 10 – Sept. 20*
Units 15B and 15C—Moose	
1 antlered bull with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler, by Federal registration permit only. The Kenai National Wildlife Refuge Manager is authorized to close the Oct./Nov. season based on conservation concerns, in consultation with ADF&G and the Chair of the Southcentral Regional Advisory Council.	*Oct. 20 – Nov. 10*

Proposed Federal Regulations

Proposal WP12-30

Unit 7 remainder, Unit 15A remainder, 15B and 15C Moose	
1 antlered bull with ~~spike-fork or~~ 50-inch antlers or with 3 or more brow tines on either antler, by Federal registration permit only. ***Antlers will be required to be inspected and sealed by an ADF&G representative.***	*~~Aug 10~~* ***Aug. 22*** *– Sept. 20*

Proposal WP12-31

Unit 15A remainder, 15B and 15C Moose

1 antlered bull with ~~spike-fork or~~ ***a spike antler on either side,*** *or 50-inch antlers or with 3 or more brow tines on either antler, by Federal registration permit only.* ***Antlers will be required to be inspected and sealed by an ADF&G representative. The Kenai National Wildlife Refuge Manager is authorized to close or restrict the Aug. 20 – Sept 20 season based on conservation concerns, in consultation with ADF&G and the Chair of the Southcentral Regional Advisory Council.***	*~~Aug. 10~~* ***Aug. 20*** *– Sept. 20*
1 antlered bull with *~~spike-fork or~~* ***a spike antler on either side,*** *or 50-inch antlers or with 3 or more brow tines on either antler, by Federal registration permit only.* ***Antlers will be required to be inspected and sealed by an ADF&G representative.*** *The Kenai National Wildlife Refuge Manager is authorized to close the Oct./Nov. season based on conservation concerns, in consultation with ADF&G and the Chair of the Southcentral Regional Advisory Council*	*Oct. 20 –* *~~Nov. 10~~* ***Oct. 31***

Note: Both proposals were submitted prior to the Alaska Board of Game meeting in March 2011.

Existing State Regulations

Unit 7 remainder

One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side	Aug. 20 – Sept. 20

Units 15A-remainder, 15B and 15C Moose

One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side	Aug. 20 – Sept. 20

Units 15B-East

One bull with 50-inch antlers or antlers with 3 or more brow tines on at least one side by permit (50 permits for drawing hunt)	Sept. 1 – Sept. 20

Extent of Federal Public Lands

Approximately 78% of the lands in Unit 7 are comprised of Federal public lands, consisting of 50% Chugach National Forest lands managed by the U.S. Forest Service (USFS), 23% Kenai Fjords National Park lands managed by the National Park Service, and 5% of lands managed by the Kenai National Wildlife Refuge (NWR). The Kenai Fjords National Park lands are not open to subsistence uses. In Unit 15, 52% of the lands are managed by the Kenai NWR. Less than 1% of managed lands are National Park Service and USDA Forest Service (**Unit 7 and Unit 15 maps**).

Customary and Traditional Use Determinations

Residents of Cooper Landing and Hope have a positive customary and traditional use determination for moose in Unit 7—remainder.

Residents of Cooper Landing, Ninilchik, Nanwalek, Port Graham and Seldovia have a positive customary and traditional use determination for moose in Units 15A and 15B.

Residents of Ninilchik, Nanwalek, Port Graham and Seldovia have a positive customary and traditional use determination for moose in Unit 15C.

Regulatory History

Unit 7—remainder

Prior to 2008, there was no Federal open season in Unit 7—remainder. In 2008, Proposal WP08-22b was adopted by the Federal Subsistence Board (Board) and established a harvest season for 1 antlered bull with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler, by Federal registration permit only from Aug. 10 – Sept. 20.

Unit 15

In July 1995, the Board adopted a positive customary and traditional use determination for moose for Ninilchik, Nanwalek, Port Graham and Seldovia in Units 15B and 15C. At the same time, the Board authorized an August 10–September 20 season with a spike-fork, 50-inch, or three or more brow tines on at least one antler regulation restriction. This provides a ten-day opportunity for Federally qualified subsistence hunters prior to the State season opening. At the time it authorized the hunt, the Board deferred making a decision with regard to customary and traditional uses of moose in Unit 15A "because use of this subunit by residents of Ninilchik and Seldovia is extremely low" (60 FR 40462).

Following Board action in 1995, the Ninilchik Traditional Council (NTC) submitted three proposals dealing with moose in Unit 15. In Proposal 23, the NTC sought to expand the positive customary and traditional use determination for Ninilchik, Nanwalek, Port Graham and Seldovia for moose in Unit 15A. In Proposal 24, the NTC requested a September 11–30 moose season with a one cow harvest limit for all of Unit 15. In Proposal 25, the Traditional Council requested a September 11–30 moose season for all of Unit 15, with a harvest limit of one antlered bull.

The Southcentral Alaska Subsistence Regional Advisory Council (Southcentral Council) supported Proposal 23—the positive customary and traditional use determination in Unit 15A for the four communities; opposed Proposal 24, allowing a cow season; and supported Proposal 25 with modification for an August 15–September 25 season and harvest limit of any bull from August 15–19 and September 21–25, with the spike-fork, 50-inch, or three or more brow tines on at least one antler regulation restriction in affect August 20–September 20. At its May 3, 1996 meeting, the Board rejected all three proposals (FSB 1996*a*).

In January 1996, the NTC filed a complaint in the District Court for Alaska challenging the Board's decision to impose the spike-fork, 50-inch, or three or more brow tines on at least one antler rule on Federally qualified subsistence users, as well as the Board's deferral of a customary and traditional use determination in Unit 15A. On June 13, 1996, the District Court upheld the antler restriction, but remanded the customary and traditional use determination for Unit 15A back to the Board. The Court

found that the Board had adequately explained its rationale for making positive customary and traditional use determinations for Units 15B and 15C, but not for Unit 15A.

In July 16, 1996, the Board took up the issue of the remand and was provided additional information on customary and traditional uses of moose in Unit 15A. The Board reversed its May 1996 decision and made a positive customary and traditional use determination for moose in Unit 15A for Nanwalek, Port Graham, Seldovia and Ninilchik. The Board also adopted a moose season in Unit 15A to run August 18–September 20 for one bull moose with the spike-fork, 50-inch, or with three or more brow tines on at least one antler restriction. The Board justified its action as follows:

> *The moose population in Unit 15A is stable at or near the carrying capacity of the habitat. The antler restrictions contained in this proposal should provide adequate protection from over harvest of breeding age bulls. The proposal is anticipated to have no significant impact on the total moose harvest in this unit, and is consistent with the conservation of a healthy moose population (FSB 1996b).*

The Board's decision to change the start of 1995 the season from August 10 to August 18 in Units 15B and 15C reduced the Federal subsistence hunt from 10 days to 2.

The Kenai Peninsula Outdoor Coalition submitted Request for Reconsideration (RFR) 96-01 on July 29, 1996, seeking a reversal of the Board's decision. Specifically, the coalition argued that the Board should abolish the Federal subsistence opportunity for moose in Unit 15A and eliminate the season. On August 14, 1996, the Board rejected the RFR (FSB 1996*c*).

Subsequent to the Board's actions, the NTC filed an amended complaint in October 1996, re-asserting its challenge to the antler size restriction and claiming that the Board had failed to properly provide for a subsistence priority as required by ANILCA. The District Court ultimately found in favor of the Federal Subsistence Board. The NTC then appealed to the Ninth Circuit Court of Appeals.

The Southcentral Council submitted a proposal to make permanent the regulations adopted for the 1996 season. This proposal (WP98-039) had the same season dates, August 18–September 20, and a harvest limit of one antlered bull with the spike-fork, 50-inch or three brow times on at least one antler restriction. This proposal was adopted by the Board at its May 1998 meeting.

The Ninth Circuit Court of Appeals rendered its decision on the NTC lawsuit on July 31, 2000 (Ninilchik Traditional Council et al. v. U.S., 227 F.3d 1186 (9th Cir. 2000)). The Court held that the Board's interpretation of the term "priority" as defined by ANILCA was reasonable, and meant to balance the competing aims of subsistence use, conservation, and recreation; while at the same time provide subsistence hunters with a meaningful preference. However, the Court also found that the Board had failed to provide support in the record for its conclusion that the two days reserved for Federally qualified subsistence users in Unit 15A constituted a priority.

Consequently, in 2001 the Office of Subsistence Management (OSM) submitted Proposal WP01-50, requesting that the dates of the subsistence moose season in Unit 15A be changed from August 18–September 20 to August 10–September 20. The Board adopted this change in May 2001, providing a total of ten days to Federally qualified subsistence users before the start of the State's general season.

In 2003, Proposal WP04-87 requested that the moose season for Unit 15A remainder be shortened by ten days from August 10–September 20 to August 20–September 20. The Board rejected this proposal at its May 2004 meeting.

Based on conservation concerns raised by the Southcentral Council, at its May 3–4, 2005 meeting, the Federal Subsistence Board deferred Proposal WP05-07, and instead considered maintaining the existing August 10–September 20 season and providing more opportunity by the addition of a late season (September 26–October 15). Ultimately, the Board noted that the additional three week season was not requested by the proponent, and because it took place during the rut, it could have an adverse affect on the moose population. Finally, the Board stated that the public should have an opportunity to comment on the season recommended by the Southcentral Council, as well as other alternatives that could potentially affect moose populations.

At its October 2005 meeting, the Southcentral Council recommended a compromise solution: retain the original August 10–September 20 season dates, but add a different late season to run October 20–November 10 in Units 15B and 15C (but not in Unit 15A). The harvest limit would remain one antlered bull with the spike-fork, 50-inch, or three or more brow tines on at least one antler restriction. The late season addressed the issue of avoiding the moose rut while providing more opportunity for subsistence users to harvest moose closer to the time period when they customarily and traditionally hunted. Excluding Unit 15A from the compromise eliminated the road access issues and associated conservation concerns. At its May 2006 meeting, the Board adopted the late season hunt as recommended by the Southcentral Council.

In 2006, the Kenai NWR Manager made two suggestions to improve the permitting process for the Unit 15B and 15C Federal late fall moose hunt:

> *Use bold print on the permit, highlighting: "Successful hunters must report their harvest within 5 days of the kill to Kenai NWR in person or by phone at (262-7021). In addition, the completed harvest report must be returned within 15 days of the close of the season, whether the hunter was successful or not. Failure to report harvest or return the harvest report may result in permits not being issued the following year and/or a citation."*
>
> *One permit should be issued, rather than two (good for both the early and late season), stating: "Kenai NWR lands in Units 15A (except Skilak Wildlife Recreation Area), 15B, and 15C, August 10 – September 20; and Kenai NWR lands in Units 15B and 15C, October 20 – November 10; 1 bull moose with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler."*

In addition, permit applicants were required to sign an affidavit and provide evidence of their status as a rural resident.

In spring 2007, the Board heard testimony on the Unit 15B and 15C late fall Federal moose hunting season. Proposal WP07-22 requested the elimination of the Federal late hunt or cap the number of permits at ten for Federally qualified subsistence users. The Board rejected Proposal WP07-22, not wanting to eliminate the late fall Federal subsistence moose hunt after only one season, especially since out of 46 permits issued, only two bulls were taken by 36 hunters (USFWS 2007). In addition, no evidence was presented to the Board in 2006 or 2007 indicating there have been any adverse effects on the moose populations in either Units 15B or 15C.

In 2008, WP08-17/18 requested that the late fall season (Oct. 20 – Nov. 10) for moose be eliminated in Units 15B and 15C. The Board opposed WP08-17/18 because the Kenai NWR Manager is authorized to close the hunt in consultation with the Southcentral Regional Advisory Council and ADF&G area biologist. Reporting requirements allow the refuge manager the ability to address any conservation concerns that may develop during the late season hunt.

In 2010, the Alaska Board of Game (BOG) closed nonresident hunting for the general season bull hunts in Units 15A and 15C for regulatory year 2011/2012. In addition, the BOG changed the antler restrictions from 3 brow tines to 4 brow tines and removed the spike-fork option to harvest a moose.

Biological Background

Units 7 & 15 Overview

Moose densities vary throughout Units 7 and 15 and are dependent upon the availability of suitable browse. Suitable browse primarily results from fire that creates a disturbance and provides conditions leading to hardwood regeneration. Following a significant disturbance such as a landslide or intense wildfire, various species of hardwood trees and shrubs will grow providing quality winter browse for moose and other species (USFWS 2001). The high moose populations in recent decades were indicative of high-quality habitat that was created by the historic burns on the Kenai Peninsula. In more recent years, the hardwood browse has been replaced by spruce or has matured past suitable browse for moose (Berg 2009). The major browse species for moose on the Kenai Peninsula are paper birch (*Betula papyrifera*), aspen (*Populus tremuloides*), willow (*Salix sp*.), alder (*Alnus sp*.), and lowbush cranberry (*Vaccinium vitisidaea*) (Oldemeyer et al. 1977). The hardwood vegetation type represents 5% of the Kenai NWR (or 10% of the forests on the Refuge) and 40% is early successional and intermediate-stage hardwood (USFWS 2010).

Browse regeneration can also result from timber harvesting or other natural (e.g., spruce bark beetle outbreak) or man-made disturbance (e.g., hydroaxing). Dendrochronolgy studies have shown that bark beetles have been historically active on the Kenai Peninsula at low levels, however the outbreak from 1989–2003 was of unprecedented size and intensity and infested 800,000 acres on the Kenai Peninsula (USFWS 2010). Increasing temperatures and drought stress because of climate change likely increased the rate of spruce bark beetle outbreaks on the Kenai Peninsula (Berg et al. 2006). In addition, the invasion of wetlands on the Kenai Peninsula by woody shrubs and black spruce may lead to a reduced moose population in the long-term (Klein et al. 2005). Wetlands are an important component for moose for wintering forage and the trend for vegetation succession of these habitat types is increasing (Klein et al. 2005 and Stephenson et al. 2006).

Recent documented declines in bull:cow ratios within Units 7 and 15 and the observed decline in bull:cow ratios within portions of Unit 15A and throughout Unit 15C are conservation concerns. The Chugach National Forest Management Plan (2009) lists moose as a Management Indicator Species and an important subsistence species in Unit 7. If not corrected, the low bull:cow ratioscould lead to low productivity and potentially severe moose population declines on the Kenai Peninsula. Currently, moose populations are at or near historic lows and appear to be declining within Unit 15A (**Figure 1**); appear to be stable but below historic highs within Unit 15B; and declining from historic highs within Unit 15C (**Figure 2**). No recent population estimates are available for Unit 7—remainder.

When combined with the low bull:cow ratios, low populations may be a significant biological concern. Moose management throughout most of Alaska intentionally skews the ratio of adults toward females and the harvest strategy on the Kenai Peninsula focused on selective harvest to facilitate recruitment into the prime breeding class and to increase bull:cow ratio (Bishop and Rausch 1974, Schwartz et al. 1992). While there is no defined bull:cow ratio that will be suitable for all populations, the ratio of males to females must be considered with moose density and distribution within the managed area. Widely distributed populations with very low densities may require higher ratios to ensure adequate reproduction whereas high density populations may not. The combination of antler size, form, and symmetry that cows recognize when selecting mates is not fully understood (Solberg and Saether 1993, Bower et al. 2001,

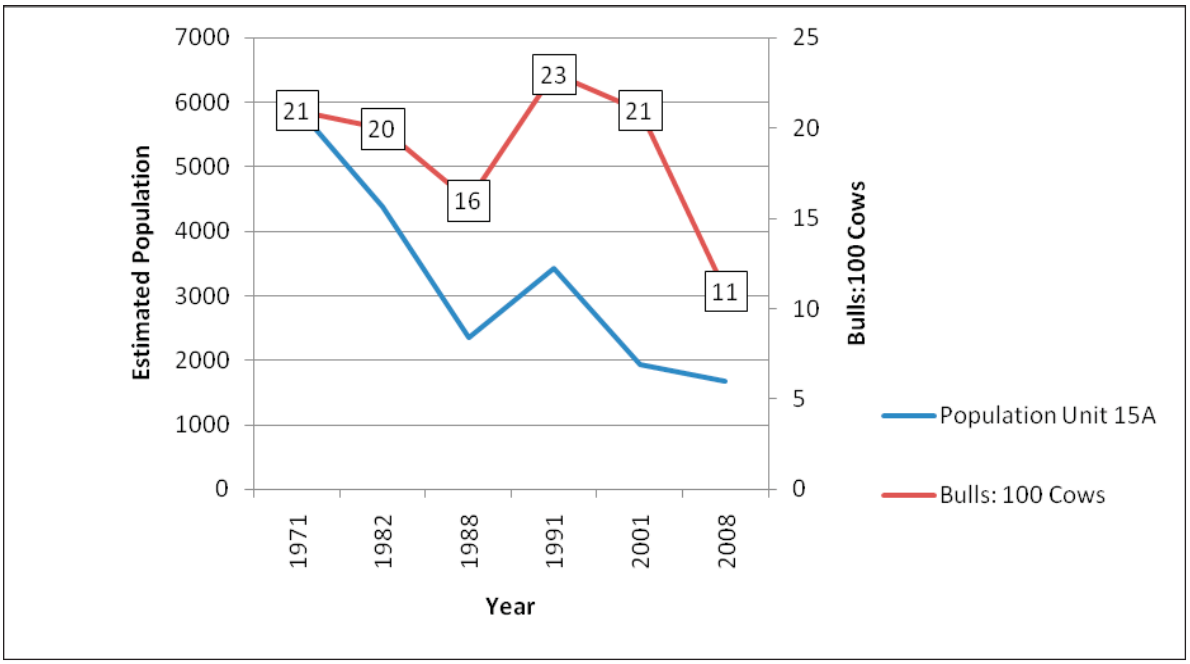


Figure 1. Unit 15A Population Data

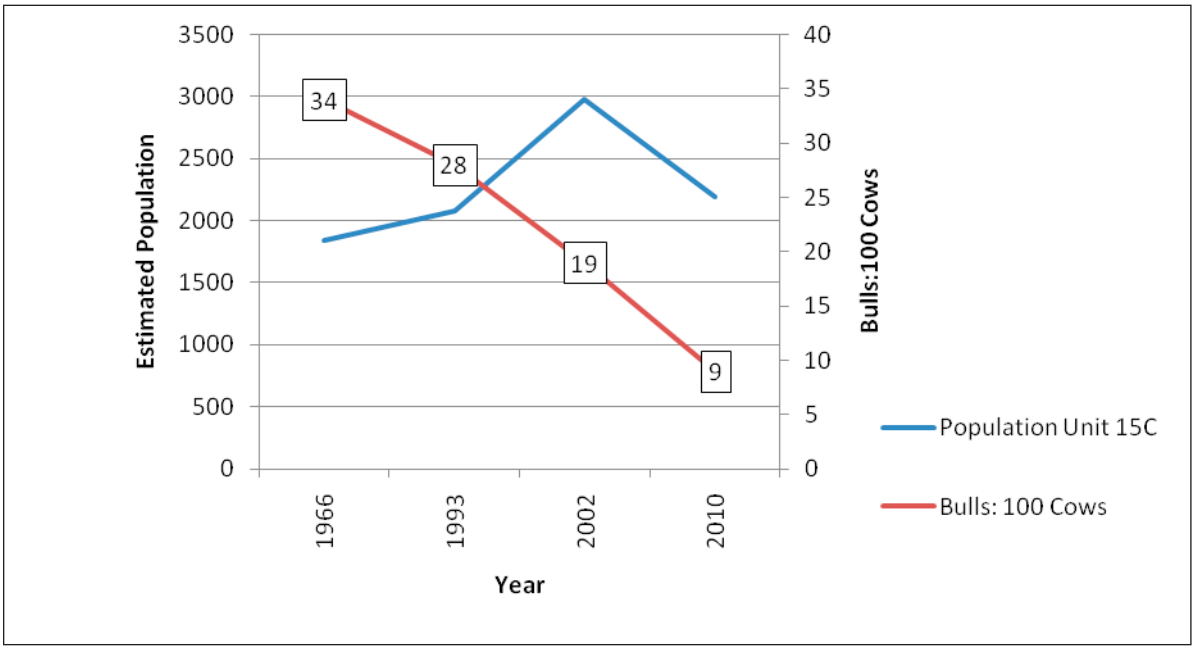


Figure 2. Unit 15C Population Data

Saether et al. 2003). However, prolonged harvests of large antlered bulls may reduce genetic variability over time and cause an irreversible loss of alleles specific to antler features (Hundertmark and Bowyer 1998, Bowyer et al. 2002).

Other factors contributing to the declining moose population include vehicle collisions and predation. From 1980 to 1986, an average of 200 moose/year were reported killed in vehicle collisions on the Kenai Peninsula (Bangs et al. 1989). From 2004 to 2011, vehicle collisions continued to be a significant source

of mortality for moose on the Kenai with an average of 213 moose/year killed (**Table 1**); most of these are either cows or calves (Miller, pers. comm. 2011). Beginning in 2008, information on moose and other wildlife collisions began to be collected in an attempt to mitigate moose mortality by planning wildlife crossings. That work is still underway. Schwartz and Franzmann (1989) found that predation by black bears accounted for 81% of all predation mortality from 1978–1988, but moose densities were regulated by habitat quality and quantity between two burned areas 1947 and 1969 on the Kenai Peninsula.

Table 1. Kenai Peninsula moose road kills 2004-2011 (L. Lewis and S. Miller, pers. comm. 2011).

Year	Unit 7	Unit 15A	Unit 15B	Unit 15C	Total Moose killed
2004/05	30	83	61	74	248
2005/06	30	45	51	86	212
2007/08	25	55	56	79	190
2008/09	23	101	41	40	205
2009/10	18	45	61	51	175
2010/11	15	137	65	46	263
Average	24	78	56	67	215

Unit 15A

Kenai NWR established a minimum post-hunting season sex ratio of 25–30 bulls:100 cows for most refuge lands within Unit 15A, with the exception of the Skilak Loop Wildlife Management Area, where the management objective is set at 40 bulls:100 cows (USFWS 1996). ADF&G's management objective for moose in Unit 15A is to maintain a minimum post-hunting season sex ratio of 15 bulls:100 cows (McDonald 2000, Selinger 2006, Selinger 2008).

The 2010/11 fall sex and age composition survey for Unit 15A, including the Skilak Loop Wildlife Management Area, revealed a bull:cow ratio of 20:100, which is lower than the long-term bull:cow ratio of 26:100 (**Table 2**) and below the established refuge goal. Of greatest concern within Unit 15A are the large areas of lands where sex ratios as low as 5 bulls:100 cows were documented.

The calf:cow ratio during the 2010/11 survey was 23 calves:100 cows, slightly less than the long-term calf:cow ratio of 25:100 (**Table 2**). Calves made up 16% of the 345 moose observed in 2010/11 survey compared to the long-term average of 17% (McDonough 2011 pers. comm.; Selinger 2011 pers. comm.).

Moose populations within Unit 15A peaked in 1971 with a reported population of approximately 5,925 (Selinger 2008). The 1991 moose population estimate was 2921–3943 animals; the 2001 population estimate was 1,700–2,430 animals. The most current population estimate (2008) was 1,405–1,934 indicating a continued population decline in Unit 15A.

Table 2. Unit 15A Aerial moose composition counts, 1992/93–2010/11 (Spraker 2002, Selinger 2006, 2008 and 2011, pers. comm.).

Year	Bulls:100 Cows	Calves:100 Cows	% Calves	Adults	Total Moose Observed
1992/93	16	36	23	1019	1331
1994/95	24	32	20	955	1199
1996/97	26	39	24	1120	1467
1998/99*	29	27	17	1248	1508
2000/01	—	—	20	1617	—
2001/02	21	31	20	620	778
2003/04[a]	23	26	17	628	763
2004/05[a]	—	—	—		
2005/06	24	16	11	544	614
2006/07[a]	11	13	10	226	252
2007/08	—	—	—	—	—
2008/09[a]	11	21	16	171	204
2009/10[a]	84	16	8	79	86
2010/11	20	23	16	288	345
Means	26	25	17	710	777

[a] Count does not include Skilak Loop Wildlife Management Area.

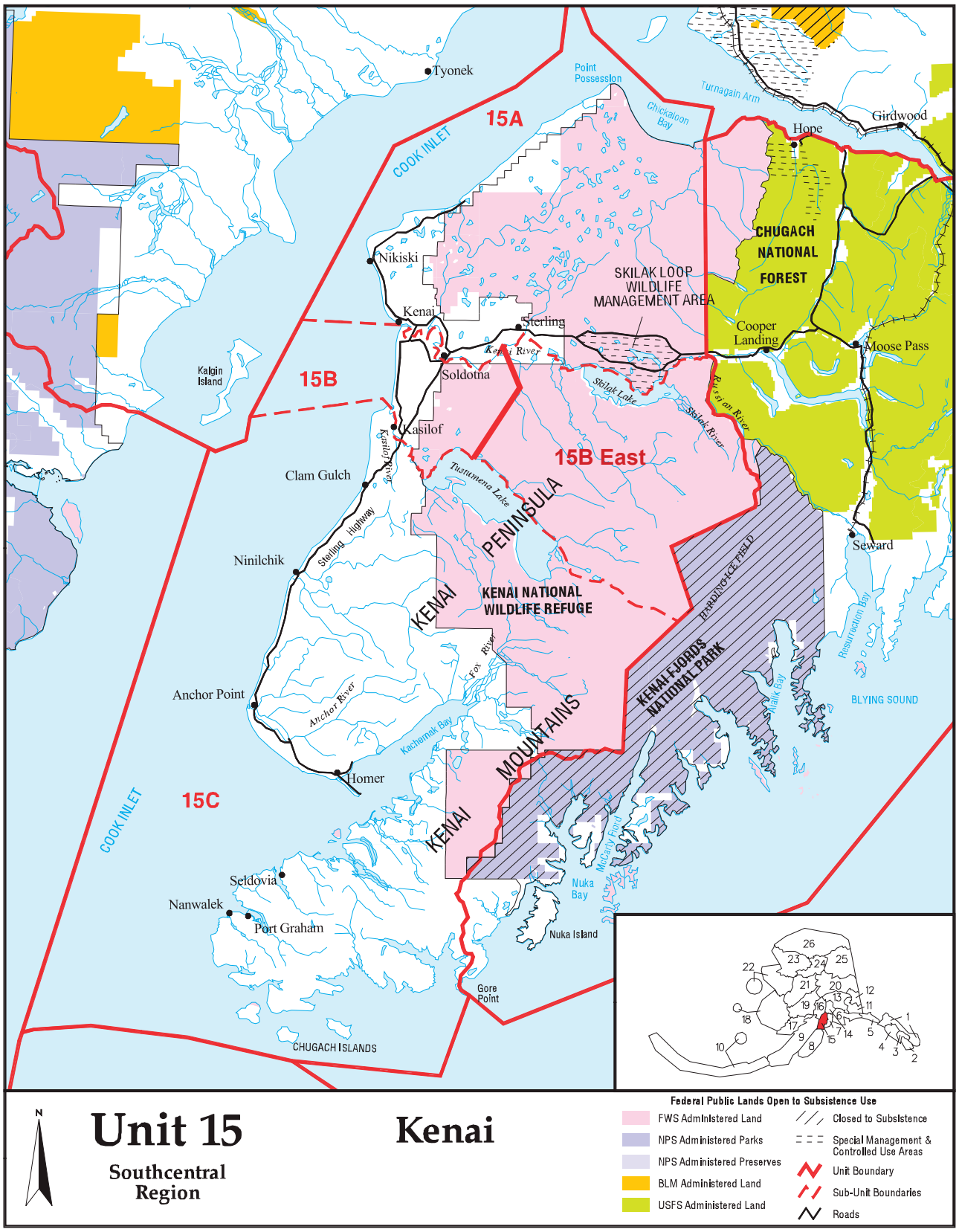
Habitat

Biologists believe the primary contributing factor to the overall population decline is a reduction in the amount and quality of moose habitat in Unit 15A. Although almost 400,000 acres burned in 1947 and 1969, there have been few fires in recent years (~1,800 acres since 2000) within Unit 15A to generate new hardwood browse (Klein et al. 2005, Berg et al. 2009). Following fire, black spruce is often converted to early successional hardwood browse, providing high quality, abundant moose browse for as long as 35 years post-fire (USFWS 2010). The forests within Unit 15A have continued to age since the 1969 burn, producing less browse as forest succession has progressed (USFWS 2010).

Unit 15B

Kenai NWR has established a minimum post-hunting season sex ratio of 25–30 bulls:100 cows within the western portion of Unit 15B and 40–60 bulls:100 cows within the eastern portion of the unit (USFWS 1996). The State's management objectives for Unit 15B west in the central Kenai Peninsula are to maintain a bull:cow ratio of 15:100 and for Unit 15B east (**Map 1**) to maintain a bull:cow ratio of 40:100

MAP 1


Tyonek
Point Possession
Turnagain Arm
Chickaloon Bay
Girdwood
Hope
15A
COOK INLET
CHUGACH NATIONAL FOREST
Nikiski
SKILAK LOOP WILDLIFE MANAGEMENT AREA
Kenai
Sterling
Cooper Landing
Moose Pass
Kenai River
Soldotna
Kalgin Island
15B
Skilak Lake
Russian River
Skilak River
Kasilof
Kasilof River
15B East
Clam Gulch
Tustumena Lake
PENINSULA
Sterling Highway
Seward
Ninilchik
HARDING ICE FIELD
KENAI
KENAI NATIONAL WILDLIFE REFUGE
Resurrection Bay
Fox River
KENAI-FJORDS NATIONAL PARK
Anchor Point
Anchor River
Aialik Bay
BLYING SOUND
Kachemak Bay
MOUNTAINS
Homer
15C
COOK INLET
KENAI
McCarty Fjord
Seldovia
Nuka Bay
Nanwalek
Port Graham
Nuka Island
Gore Point
CHUGACH ISLANDS
N
Unit 15
Southcentral Region
Kenai
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads

(McDonough 2004, Selinger 2006, Selinger 2008). There has been little change in habitat conditions within Unit 15B since there have been no major or minor wildfires and most of the area is designated wilderness (USFWS 2010).

The most up-to-date census figures for Unit 15B are from 2001 when the population was estimated at 958. Composition surveys were completed in 2010/11. These composition surveys estimated 33 bulls:100 cows. Calves were estimated to comprise 6% of the population. The 2010/11 composition surveys were conducted within Unit 15B east where the USFWS has a 40–60 bulls:100 cows management objective.

Determining a pattern within Unit 15B is complicated by a lack of comparable survey data from previous years. Composition surveys were completed in both 2009/10 and 2010/11 but not within the same count areas. Prior to these recent surveys, composition surveys had not been completed since 1996/97 and not within the same count areas as those used in recent years. Anecdotal evidence suggests that population declines are occurring within Unit 15B and these population declines are being compounded by low bull:cow ratios within at least the western portion of the Unit (Miller 2011, pers. comm.).

Unit 15C

Kenai NWR has established a minimum post-hunting season sex ratio of 40–60 bulls:100 cows within the Caribou Hills portion of the unit and 25–30 bulls:100 cows within the remainder (USFWS 1996). The State's management objectives for Unit 15C are to maintain a minimum post-hunting season sex ratio of 15–20 bulls:100 cows (McDonough 2004, Selinger 2006, Selinger 2008).

The 2010/11 fall sex and age composition survey for Unit 15C revealed an extremely low bull:cow ratio of 9:100, which is much lower than the long-term bull:cow ratio of 29:100 (**Table 3**) and well below the established refuge goal. Based upon ADF&G's 2010 population estimate of 2,195 animals, the moose population in Unit 15C has decreased from the 2001 when the population was estimated to be 2,981 animals. Without action to address the imbalance in sex ratios, the moose population within Unit 15C will likely continue to decline.

Habitat

There have been large wildland fires (Windy Point and Crooked Creek) within the past decade and widespread logging of beetle-killed spruce on the lower Kenai Peninsula which set the vegetation back to an earlier successional stage and allowed for the growth of more browse (USFWS 2010). While moose may benefit from greater availability of post-fire browse in the short-term, mature hardwoods are relatively fire-resistant and may become the prevalent forest type.

Harvest History

Unit 7—remainder

From 2004–2009, Federally qualified users within Unit 7—remainder harvested an average of 2.6 spike/fork moose (range 1–4) (**Table 4**) and an average of 1.8 moose with 50" antlers or 3 or more brow tines (**Table 5**) for a total of 16 moose. Spike/fork moose comprised 31% (5 of 16) and 50" or 3 or more brow tines comprised the remaining 69% of the total harvest (11 of 16) by Federally qualified users (**Tables 4 and 5**).

Non-Federally qualified users harvested an average of 8.6 spike/fork moose (range 3 – 13) (**Table 4**) and an average of 16.5 moose (range 12–23) with 50" antlers or 3 or more brow tines (**Table 5**). The

Table 3. Unit 15C Aerial moose composition counts, 1990/91–2010/11 (Spraker 2002, Selinger 2006, 2008 and 2011, pers. comm.)

Year	Bulls:100 Cows	Calves:100 Cows	% Calves	Adults	Total Moose Observed
1990/91	37	22	14	259	301
1991/92	36	17	23	705	913
1992/93	28	33	21	663	834
1993/94	86	22	10	69	77
1994/95	19	41	26	1,283	1,727
1996/97	37	28	17	285	343
1997/98	31	46	26	649	877
1998/99	61	31	16	87	104
1999/00	27	18	12	506	578
2001/02	10	49	31	309	448
2003/04	26	33	15	626	1,059
2005/06	21	27	18	637	780
2007/08	12	18	14	183	212
2008/09	13	10	8	492	537
2009/10	13	18	14	368	426
2010/11	9	19	15	617	725
Means	29	29	20	500	642

proportion of harvest by non-Federally qualified users was 32% (52 of 161) spike/fork moose and 61% (99 of 161) were 50” or 3 or more brow tines (**Tables 4 and 5)** with the remaining percentage being moose with unknown antler configuration.

For all users under the current regulation of 50” or 3 or more brow tines, an average of 18.3 bulls (range 12 – 27) have been harvested between 2004 and 2009; this comprised 62% (110 of 177) of the total harvest for all users (**Table 6 and Figure 3**). The proposed regulation eliminates harvesting a moose with spike/fork and 3 brow tines < 50” antlers. Using the same harvest data from 2004 to 2009, an average of 12.5 bulls (range 8 – 15) with 50” or 4 or more brow tines were harvested and comprised 42% (75 of 177) of the total harvest (**Table 6 and Figure 3**). A specific breakdown of antler configuration for medium (<50”) and large bulls (>50”) and associated number of brow tines is in **Table 7**.

Table 4. Proportion of harvest of spike-fork moose within total harvest in Unit 7-remainder and Unit 15 by individuals who live in communities with customary and traditional use determination and non-Federally qualified users (USFWS 2011)

	Unit 7 Remainder Spike-fork harvest		Unit 15A Spike-fork harvest		Unit 15B Spike-fork harvest		Unit 15C Spike-fork harvest	
Year	**C & T residents**	**Non-Federally qualified users**	**C & T residents**	**Non-Federally qualified users**	**C & T residents**	**Non-Federally qualified users**	**C & T residents**	**Non-Federally qualified users**
2004	1 (100%)	13 (42%)	1 (50%)	72 (56%)	0	29 (81%)	28 (68%)	138 (58%)
2005	0	8 (24%)	2 (100%)	80 (66%)	0	36 (77%)	21 (55%)	141 (59%)
2006	1 (25%)	11 (42%)	0	85 (66%)	0	31 (82%)	29 (76%)	103 (58%)
2007	3 (100%)	3 (20%)	0	74 (70%)	0	29 (78%)	14 (50%)	106 (59%)
2008	0	12 (41%)	0	85 (75%)	0	28 (93%)	17 (71%)	112 (67%)
2009	0	5 (19%)	0	67 (61%)	1 (50%)	24 (71%)	24 (67%)	121 (58%)

(%) represents the percentage of harvest that was a spike-fork moose within total harvest by user class

Table 5. Proportion of harvest of 50” or 3 or more brow tine within total harvest in Unit 7-remainder and Unit 15 by individuals who live in communities with customary and traditional use determination and non-Federally qualified users (USFWS 2011)

	Unit 7 Remainder 50” or 3+ brow tine harvest		Unit 15A 50” or 3+ brow tine harvest		Unit 15B 50” or 3+ brow tine harvest		Unit 15C 50” or 3+ brow tine harvest	
Year	**C & T residents**	**Non-Federally qualified users**	**C & T residents**	**Non-Federally qualified users**	**C & T residents**	**Non-Federally qualified users**	**C & T residents**	**Non-Federally qualified users**
2004	0	17 (54%)	1 (50%)	49 (40%)	1 (100%)	5 (14%)	13 (32%)	85 (36%)
2005	4 (100%)	23 (68%)	0	30 (25%)	0	9 (19%)	11 (29%)	90 (37%)
2006	3 (75%)	13 (50%)	2 (100%)	35 (27%)	1 (100%)	5 (13%)	9 (24%)	56 (32%)
2007	0	12 (80%)	2 (100%)	26 (30%)	2 (100%)	7 (19%)	14 (50%)	62 (34%)
2008	3 (100%)	14 (8%)	0	23 (20%)	3 (100%)	2 (6%)	7 (29%)	48 (29%)
2009	1 (100%)	20 (77%)	0	39 (35%)	1 (50%)	7 (21%)	12 (33%)	77 (37%)

Unit 15A

In Unit 15A, Federally qualified users harvested an average of 0.5 spike/fork moose and an average of 0.83 moose with 50” antlers or 3 or more brow tines for a total of 8 bull moose between 2004 – 2009. Spike/fork moose comprised 38% (3 of 8) and moose with 50” or 3 or more brow tines comprised 62% (range 5 of 8) of the total harvest by these individuals (**Table 4 and 5**).

Non-Federally qualified users harvested an average of 78 spike/fork moose and an average of 34 moose with antler 50” or with 3 or more brow tines. Spike/fork moose comprised 65% of the harvest and 28% were moose with antlers 50” or with 3 or more brow tines with the remaining percentage being moose with unknown antler configuration (**Table 4 and 5**).

For all users under the current regulation of 50” or 3 or more brow tines, an average of 34.5 bulls (range 23 – 50) have been harvested between 2004 and 2009; this comprised 29% (207 of 718) of the total harvest for all users (**Table 6 and Figure 4**). The proposed regulation eliminates harvesting a moose with spike/fork and 3 brow tines < 50” antlers. Using the same harvest data from 2004 to 2009, an average of 21.8 bulls (range 16 – 32) with 50” or 4 or more brow tines were harvested and comprised 22% (131 of 718) of the total harvest (**Table 6 and Figure 4**). A specific breakdown of antler configuration for medium (<50”) and large bulls (>50”) and associated number of brow tines is in **Table 7**.

Unit 15B

From 2004–2009, Federally qualified users harvested an average of 0.16 spike/fork moose and an average of 1.3 moose with 50” antlers or with 3 or more brow tines for a total of 9 moose. Spike/fork comprised less than 1% of the total harvest by these individuals (**Table 4 and 5**).

Non-Federally qualified users harvested an average of 29.5 spike/fork moose (range 24–36) and an average of 5.8 moose with antlers that were 50” or with 3 or more brow tines. Spike/fork moose comprised 80% of the harvest and 15% were moose with antlers 50” or with 3 or more brow tines with the remaining percentage being moose with unknown antler configuration (**Table 4 and 5**).

Under the current regulation of 50” or 3 or more brow tines, an average of 7.2 bulls (range 5 – 9) has been harvested between 2004 and 2009; this comprised 19% (43 of 231) of the total harvest for all users (**Table 6 and Figure 5**). The proposed regulation eliminates harvesting a moose with spike/fork and 3 brow tines < 50” antlers. Using the same harvest data from 2004 to 2009, an average of 3.8 bulls (range 2 – 7) with 50” or 4 or more brow tines were harvested and comprised 10% (23 of 231) of the total harvest (**Table 6 and Figure 5**). A specific breakdown of antler configuration for medium (<50”) and large bulls (>50”) and associated number of brow tines is in **Table 7**.

Unit 15C

In Unit 15C, Federally qualified users harvested an average of 22 spike/fork moose and an average of 11 moose with 50” antlers or 3 or more brow tines for a total of 199 bull moose between 2004 – 2009. Spike/fork moose comprised 67% and moose with 50” or 3 or more brow tines comprised 33% of the total harvest by these individuals (**Table 4 and 5**).

Non-Federally qualified users harvested an average of 120 spike/fork moose and an average of 70 moose with antler 50” or with 3 or more brow tines. Spike/fork moose comprised 59% of the harvest and 34% were moose with antlers 50” or with 3 or more brow tines with the remaining percentage being moose with unknown antler configuration (**Table 4 and 5**).

Table 6. Total harvest by antler class from all users 2004-2009 (S. Miller, pers. comm. 2011 and USFWS 2011).

Unit 7	2004	2005	2006	2007	2008	2009	Total	Average
Spike-fork	14	8	12	6	12	5	57	9.5
50" or ≥ 3 brow	17	27	16	12	17	21	110	18.3
50" or ≥ 4 brow	**12**	**15**	**14**	**8**	**12**	**14**	**75**	**12.5**
Total (including unk antler)	32	38	30	18	32	27	177	29.5
% of spike/fork	44%	21%	40%	33%	38%	19%	32%	
% of 50" **or** ≥ 3 brow	53%	71%	53%	67%	38%	78%	62%	
% of 50" **or** ≥ 4 brow*	38%	40%	47%	44%	38%	52%	42%	
Unit 15A	2004	2005	2006	2007	2008	2009	Total	Average
Spike-fork	73	82	85	76	85	67	468	78
50" or ≥ 3 brow	50	30	37	28	23	39	207	34.5
50" or ≥ 4 brow	**32**	**18**	**27**	**16**	**16**	**22**	**131**	**21.8**
Total (including unk antler)	131	123	130	111	113	110	718	119.7
% of spike-fork	56%	67%	65%	68%	75%	61%	65%	
% of 50" or ≥ 3 brow	38%	24%	28%	25%	20%	35%	29%	
% of 50" or ≥ 4 brow*	24%	15%	21%	14%	14%	20%	18%	
Unit 15B	2004	2005	2006	2007	2008	2009	Total	Average
Spike-fork	29	36	31	29	28	25	178	29.7
50" or ≥ 3 brow	6	9	6	9	5	8	43	7.2
50" or ≥ 4 brow	**2**	**4**	**5**	**7**	**2**	**3**	**23**	**3.8**
Total (including unk antler)	37	47	39	39	33	36	231	38.5
% spike-fork	78%	77%	79%	74%	85%	66%	77%	
% of 50" or ≥ 3 brow	16%	19%	15%	23%	15%	22%	19%	
% of 50" or ≥ 4 brow*	5%	9%	13%	18%	6%	8%	10%	
Unit 15C	2004	2005	2006	2007	2008	2009	Total	Average
Spike-fork	166	162	132	121	129	145	855	142.5
50" or ≥ 3 brow	98	101	65	76	55	89	484	80.7
50" or ≥ 4 brow	**53**	**61**	**43**	**52**	**31**	**64**	**304**	**50.7**
Total (including unk antler)	278	279	215	208	192	246	1418	236.3
% spike-fork	60%	58%	61%	58%	67%	59%	60%	
% of 50" or ≥ 3 brow	35%	36%	30%	37%	29%	36%	34%	
% of 50" or ≥ 4 brow*	19%	22%	20%	25%	16%	26%	21%	

* The percentage of total harvest of 50” or ≥ 4 brow tine is nested within the percentage of 50” or ≥ 3 brow tine; therefore, the total percentage between % of spike-fork, % of 50” or ≥ 3 brow, and the % of 50” or ≥ 4 brow is greater than 100%.

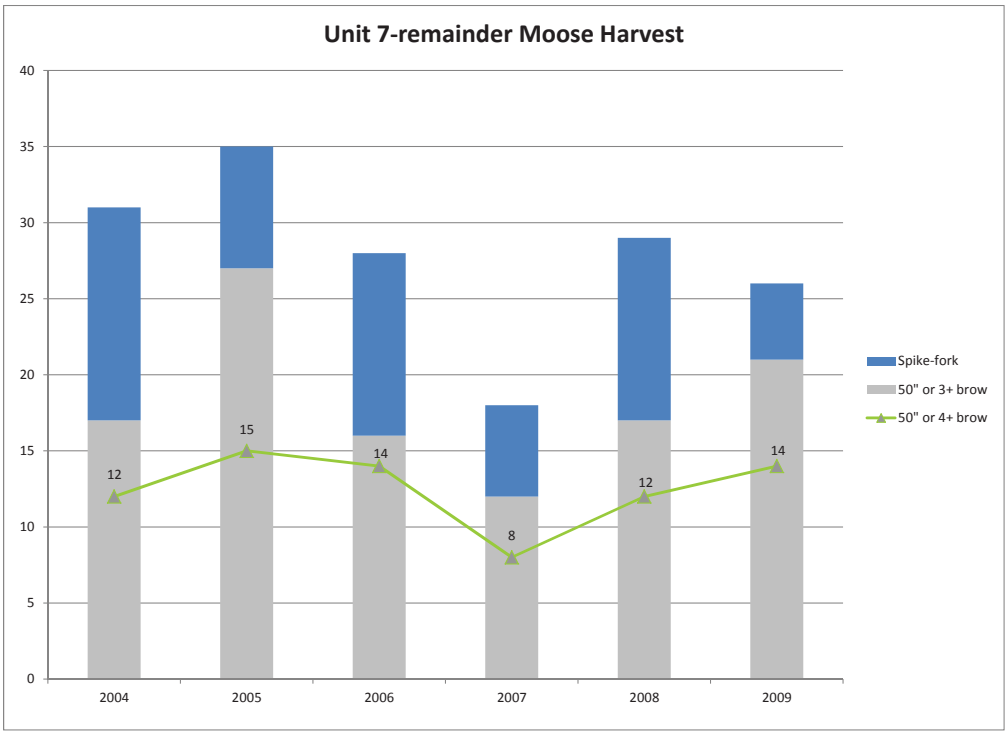


Figure 3. Unit 7-remainder moose harvest by all users with current spike/fork, >50" or 3+ brow tine antler restriction and proposed 50" or 4+ brow tine harvest restrictions.

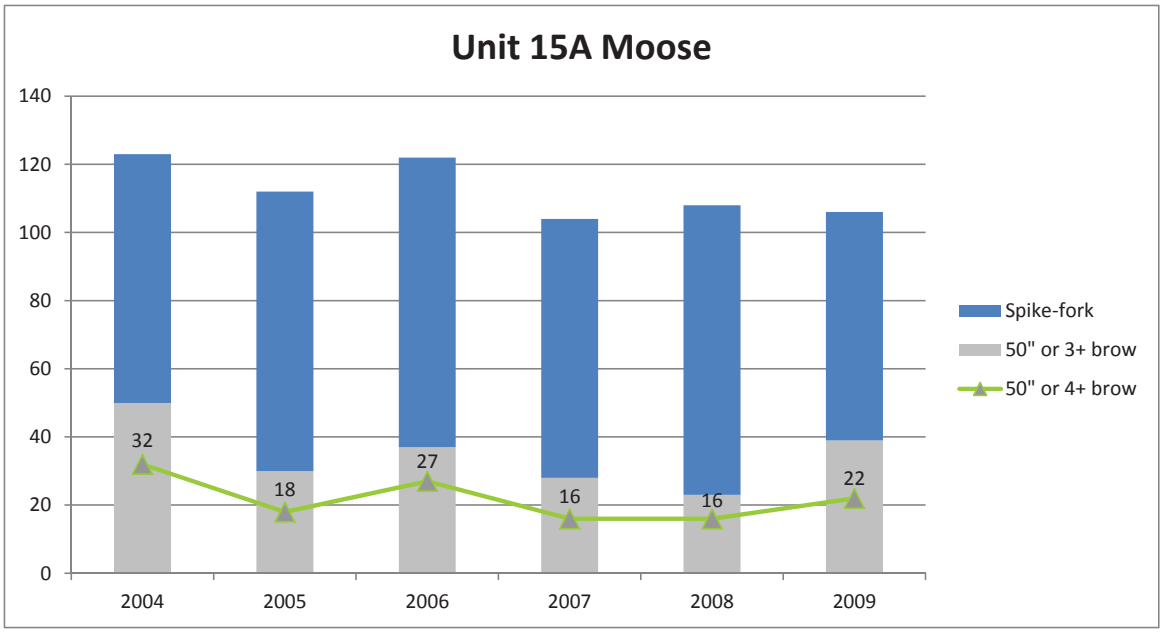


Figure 4. Unit 15A moose harvest by all users with current spike/fork, >50" or 3+ brow tine antler restriction and proposed 50" or 4+ brow tine harvest restrictions.

Table 7. Total harvest by antler class for medium and large bulls from all users 2004-2009 (S. Miller, pers. comm. 2011 and USFWS 2011).

	Medium Bulls (<50")			Large Bulls (>50")					Legal harvest under proposed 50" or ≥ 4 brow tine	% of total harvest
	# of Brow Tines			# of Brow Tines						
Year	3	4	Total	1	2	3	4+	T		
2004	72	18	90	1	20	38	22	81	99	20.6%
2005	69	12	81	2	32	40	12	86	98	19.9%
2006	35	10	45	0	40	27	12	79	89	21.3%
2007	42	6	48	2	35	28	12	77	83	22.0%
2008	39	6	45	2	23	20	10	55	61	16.4%
2009	54	7	61	2	41	37	16	96	103	24.5%

Under the current regulation of 50" or 3 or more brow tines, an average of 80.7 bulls (range 55 – 101) have been harvested between 2004 and 2009 which comprised 34% (484 of 1,418) of the total harvest for all users (**Table 6 and Figure 6**). The proposed regulation eliminates harvesting a moose with spike/fork and 3 brow tines < 50" antlers. Using the same harvest data from 2004 to 2009, an average of 50.7 bulls (range 31 – 64) with 50" or 4 or more brow tines were harvested and comprised 21% (304 of 1,418) of the total harvest (**Table 6 and Figure 6**).

The impact of various harvest scenarios on the bull:cow ratio within 15C, specifically, was analyzed by ADF&G (McDonough pers. comm. 2011, **Figure 7**). Spike/fork moose comprised the predominate antler type that was harvested in Unit 15 and the harvest restrictions implemented by the Board of Game in 2011 including requiring 4 brow tine antlers for harvest, have the highest probability of achieving management objectives, short of a total season closure, during the 2-year management period (**Figure 8**). Comparable results could be expected in the remainder of Unit 15 and in Unit 7—remainder. Child et al. (2010) found that the spike/fork regulation in British Columbia exposed 16% of all bulls (n = 1,886) to harvest. By social class, 46.2% were yearlings, 6% were teens (2.5 – 3.5 years) and 2.4% of prime bulls (4.5 – 11.5 years). On the Kenai Peninsula from 2004–2009, approximately one/third of the harvest has been spike/fork bulls in Unit 7 and the majority of harvest (59%) within Unit 15 has been spike/fork bulls. A specific breakdown of antler configuration for medium (<50") and large bulls (>50") and associated number of brow tines is in **Table 7**.

Current Events Involving Species

In 2011, the BOG closed nonresident hunting for the general season bull hunts in Units 15A and 15C for regulatory year 2011/2012. In addition, the BOG changed the antler restrictions from 3 brow tines to 4 brow tines and removed the spike-fork option to harvest a moose in Units 7 and 15. Antlers are required to be sealed by an ADFG representative in Homer, Soldotna or Anchorage within ten days of harvest within Units 7 and 15. In March 2011, the Kenai NWR Manager discussed the potential changes in State regulations with the Southcentral Regional Advisory Council (Council). Because this discussion occurred before the BOG met and made its regulatory changes, the Kenai NWR manager also mentioned the possibility of submitting a proposal or special action in response to the State's action. The Council briefly discussed the State's proposed changes, and differing opinions were expressed (Appendix A).

Changing antler restrictions is meant to be a short-term solution to allow the increase in bull:cow ratios. Eliminating the spike-fork option will allow bull:cow ratios to recover to management objectives more

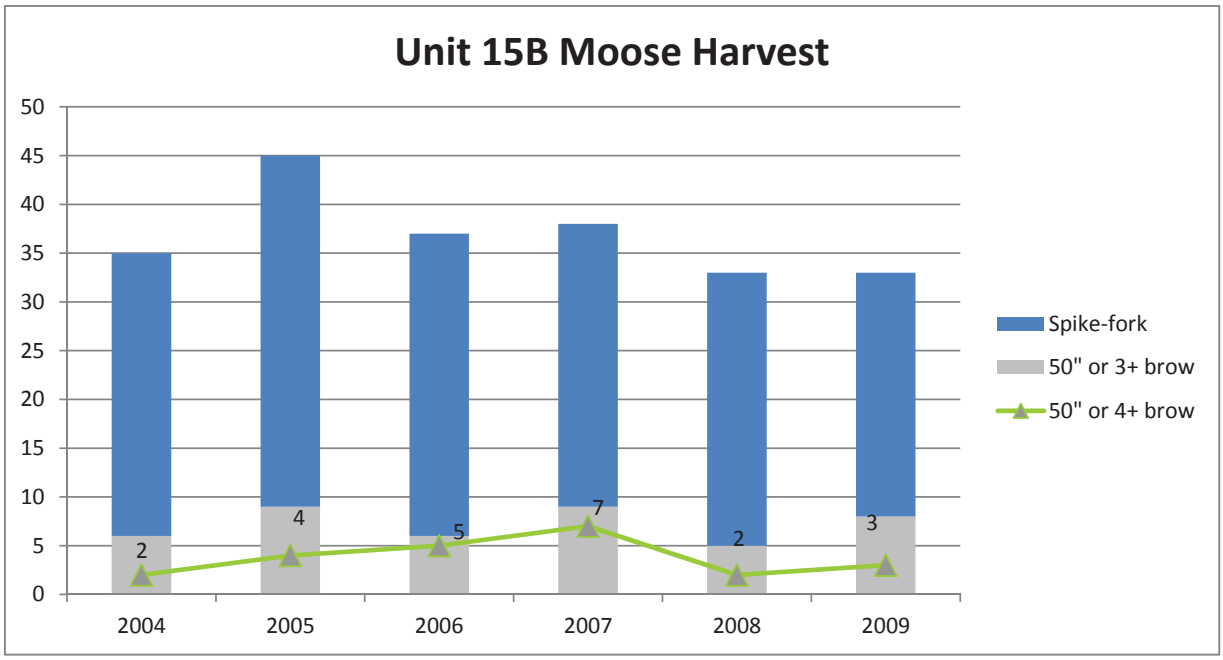


Figure 5. Unit 15B moose harvest by all users with current spike/fork, >50" or 3+ brow tine antler restriction and proposed 50" or 4+ brow tine harvest restrictions.

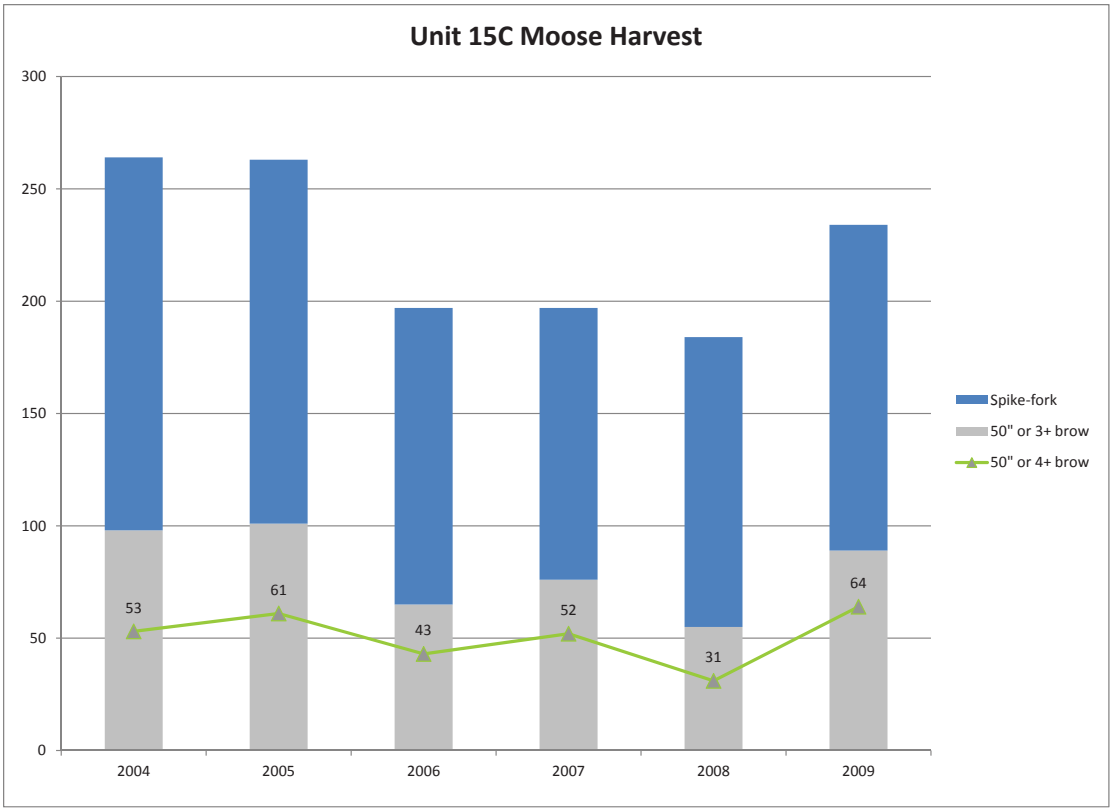


Figure 6. Unit 15C moose harvest by all users with current spike/fork, >50" or 3+ brow tine antler restriction and proposed 50" or 4+ brow tine harvest restrictions.

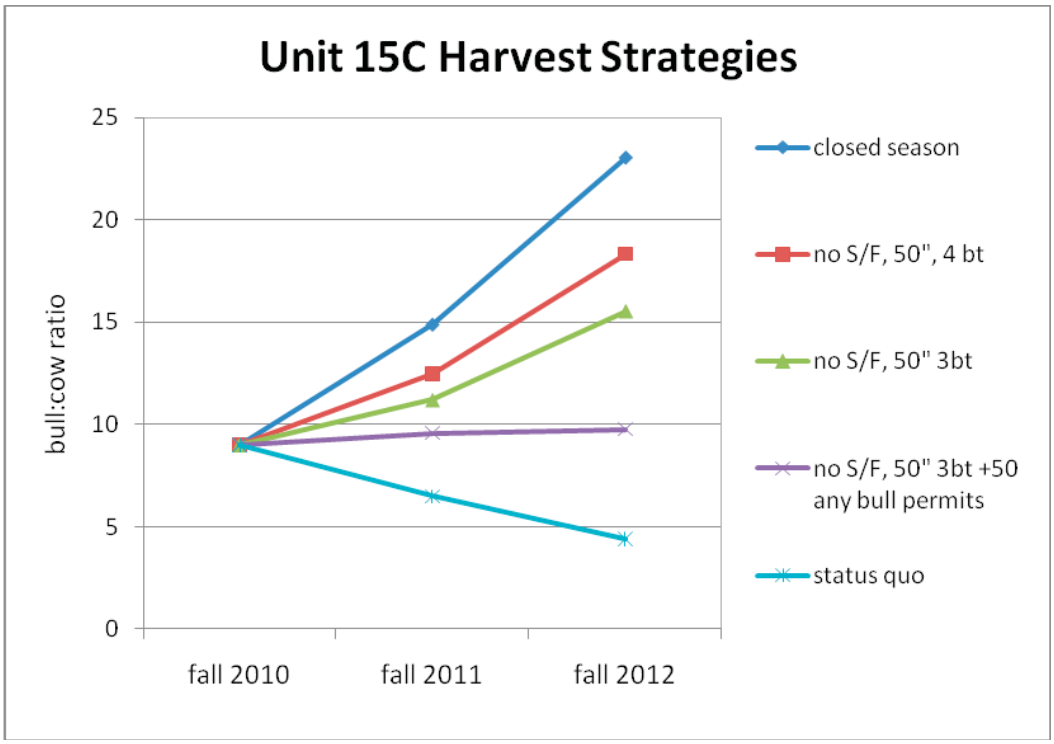


Figure 7. Anticipated Impacts of Harvest Restrictions within Unit 15C.

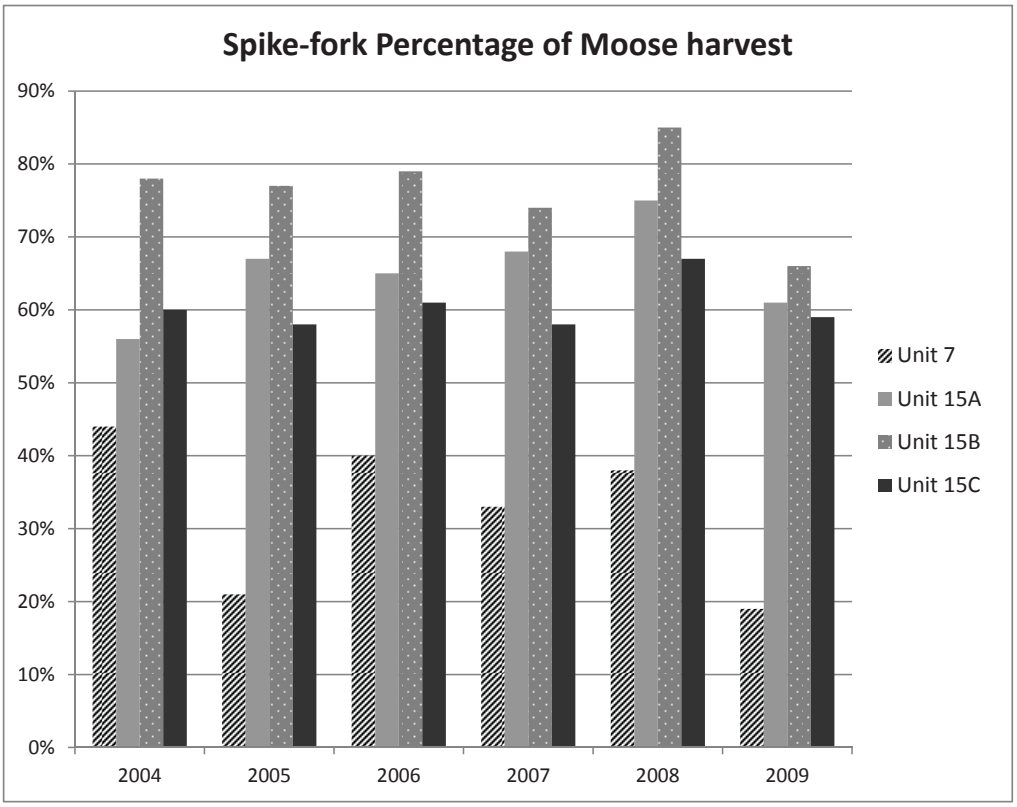


Figure 8. Percentage of harvest by all users that were spike-fork moose for Unit 7-remainder and Unit 15 subunits.

quickly thereby addressing conservation concerns. In addition, increasing the brow tine requirement to 4 brow tines will limit the number of large bulls harvested in the area while still allowing for a harvest opportunity of bulls with 50" antlers regardless of the number of brow tines and bulls with 4 brow tines with less than 50" antlers. Regulations can be changed after the 2011 season by temporary special action if the bull:cow ratios have rebounded. Sealing the antlers will allow managers to determine if the decline in bull:cow ratios was due to the ineffectiveness of the spike/fork/50"/3-brow tine regulation or if any illegal harvest was a contributing factor. Requiring the sealing of antlers will allow managers access to view teeth to give essential biological data to help determine the age structure of the moose population within Units 7 and 15.

The Kenai NWR submitted a Special Action in April 2011 to align with the State's regulatory changes. As noted above, on July 19, 2011, the Federal Subsistence Board adopted WSA11-02 to align with State regulations to change the antler restrictions from 3 brow tines to 4 brow tines and removed the spike-fork option to harvest a moose in Units 7 and 15 to address conservation concerns in the shortest timeframe. Antlers are required to be sealed within ten days of harvest by an authorized representative. This regulatory change is in effect only through September 20, 2011.

Other Alternatives Considered

Maintaining the current Federal regulations regarding antler restrictions despite changes to State antler regulations

The proposed changes in antler restrictions are designed to be a short-term (2 years) management strategy to allow the increase in bull:cow ratios. If Federal subsistence regulations continue to allow the spike-fork and 3 brow tine moose to be harvested, Federal users who have been harvesting under State regulations may choose to hunt under the less restrictive Federal moose regulations. This would minimize expected conservation gains from the new State harvest strategy and adversely impact the productivity of the moose population. Maintaining the current Federal regulations to determine whether there will be an increase in the number of Federal permits used for the first year could delay the benefits of the new State harvest strategy and negatively impact Federally qualified users in the future.

Establishing a quota for spike/fork bulls or bulls with 50" or 3 brow tines for the Federal season

Quotas have been established for moose in other Units throughout Alaska. Typically, if the herd growth rate is approximately 10% in a given year, the harvest objective for that hunting season is 2–3% of the herd. Management plans that establish biological thresholds (e.g., herd size, sex ratio, cow-calf ratio) are used to determine herd stability before a harvest quota is identified. No recent population estimates are available for Unit 7-remainder, and population estimates and bull:cow ratios for Units 15A and 15C have decreased to very low ratios. While there has not been a recent population estimate in Unit 15B, the current bull:cow ratio is 33 bulls:100 cows which is below the Federal management goal of 40–60 bulls:100 cows and calves were estimated to comprise 6% of the population. The Federal Subsistence Board provides for a subsistence priority on Federal public lands (36 CFR 242.10 (d)(6) and 50 CFR 100.10(d)(6)); they do not establish any quantitative measurement of the subsistence resources needed for subsistence harvest. The authority to manage the hunt would be granted with a letter of delegation from the Federal Subsistence Board to the Federal manager. Under 36 CFR 242.10 (d)(6) and 50 CFR 100.10 (d)(6) the Federal Subsistence Board can delegate authority to the Federal manager to modify or restrict harvest limits, season dates, and methods and means. Although a quota system could be used, it would be difficult to manage the hunt in-season as the quota numbers would be relatively low. If there were a large number of hunters in the field, it would be difficult to close the hunt in a timely manner and therefore

avoid overharvest; this would adversely impact the productivity of the moose population. Should a quota system be implemented, timely harvest reporting would be critical.

Maintain the current Federal antler restriction in Unit 7 and change the Federal season in Unit 15 to align with the State season

While reported harvest by Federally qualified subsistence users has been small, approximately one/third (32%) of the harvest from 2004 to 2009 has been spike/fork bulls in Unit 7 and 62% were bulls with antlers that were 50" or 3 or more brow tines. The proposed regulation would allow the maximum increase of bull:cow ratios besides closing the seasons. Eliminating the spike/fork option but still allowing the harvest of bull moose with 50" antlers or 3 or more brow tines, would allow the increase of bull:cow ratios, but not at the maximum level which is one of the reasons for a two year management strategy (**Figure 7**). If Federal subsistence regulations continue to allow the harvest of spike-fork and 3 brow tine moose to be harvested, many Federal users who have been harvesting under State regulations may choose to hunt under the less restrictive Federal moose regulations, minimizing the conservation gains expected through the new State harvest strategy.

Closure of Federal public lands to non-Federally qualified users completely or by subunit

Title VIII, Section 815(3) of ANILCA allows closures when necessary for the conservation of healthy populations of fish and wildlife, and to continue subsistence uses of such populations. Closing some or all Federal Lands to non-Federally qualified subsistence users could place additional hunting pressure on State managed lands or the remaining subunits, negating conservation benefits for those areas. There is a conservation concern due to very low bull:cow ratios for some parts of Unit 15A and all of Unit 15C. While there has not been a recent population estimate in Unit 15B, the current bull:cow ratio is 33 bulls:100 cows which is below the Federal management goal of 40–60 bulls:100 cows and calves were estimated to comprise 6% of the population.

Federally qualified subsistence users in Units 7 and 15 have an extended early season and a late season that is not available to non-Federally qualified users. Closing some or all Federal public lands to non-Federally qualified users would provide less competition for Federally qualified users. Should closures be implemented, and additional restrictions become necessary, an analysis based on Section 804 of ANILCA could ascertain who would qualify to hunt among those with a positive customary and traditional use determination for moose.

Section 804 Analysis

An analysis based on Section 804 of ANILCA shall be conducted whenever a proposal to change Federal regulations requests a prioritization for use of a subsistence resource among rural residents having customary and traditional use of that resource. In this case, such an analysis was developed because of the small harvestable surplus of moose in Unit 15 and the number of Federally qualified rural residents eligible to hunt moose in Unit 15. Because there are only two communities (with a combined population of 481 in 2010 [see **Table 8**]) whose residents are eligible to hunt for moose on Federal public lands in Unit 7, a Section 804 analysis was not developed for Unit 7.

In 2011, the population of all of those eligible to harvest moose in Unit 15 is approximately 2,451 (ADCRA 2011; see **Table 8**). Ninilchik[1], Nanwalek, Port Graham, and Seldovia have a positive customary and traditional use determination for moose in all of Unit 15 (15A, 15B, and 15C); Cooper Landing has a

[1] Ninilchik includes the Census Designated Place of Happy Valley.

Table 8. The population of communities in the customary and traditional use determination for moose in Units 7—remainder[a] and Unit 15[b], 1990, 2000, and 2010 (ADCRA 2011).

	1990	2000		2010		2000-2010 Percentage Change in Population
Community	**Population**	**Population**	**Number of Households**	**Population**	**Number of Households**	
Nanwalek	158	177	45	254	55	44%
Ninilchik[c]	765	1,261	516	1,476	682	17%
Port Graham	166	171	70	177	79	4%
Seldovia	316	286	134	255	121	-11%
Hope[d]	161	137	77	192	97	40%
Cooper Landing	243	369	162	289	161	-22%
Totals	1,809	2,401	1,004	2,643	1,195	10%

[a] Hope and Cooper Landing.
[b] All of Unit 15: Ninilchik, Seldovia, Nanwalek, and Port Graham and Cooper Landing for Unit 15A and 15B.
[c] Ninilchik includes Happy Valley Census Desginated Place (CDP).
[d] Hope includes Sunrise CDP.

positive customary and traditional use determination for Unit 15A and 15B, but not for Unit 15C.

Section 804 of ANILCA provides a subsistence priority for the taking of fish and wildlife on Federally administered lands and waters. A subsistence priority is implemented through appropriate limitations whenever it is necessary to restrict the taking of populations of fish and wildlife on these lands for subsistence uses in order to protect the continued viability of fish and wildlife populations, or to continue such uses. These limitations are based on the application of three criteria: 1) customary and direct dependence upon the populations as the mainstay of livelihood; 2) local residency; and 3) the availability of alternative resources. The following section addresses these criteria as they relate to rural residents with a positive customary and traditional use determination for moose in Unit 15.

1. Customary and Direct Dependence upon the Populations as a Mainstay of Livelihood

As noted above, the communities under consideration for this Section 804 analysis are those with positive customary and traditional use determinations in Unit 15A, 15B, and 15C, which includes Ninilchik, Nanwalek, Port Graham, Seldovia, and for Unit 15A and 15B, Cooper Landing.

Moose in Unit 15 are an important subsistence resource to the residents of Cooper Landing, Ninilchik, Nanwalek, Port Graham, and Seldovia. Harvests vary according to the location of the communities and population size. Reported harvests in Units 15A, 15B and 15C by Federally qualified subsistence users are discussed above in the harvest history section, and reflected in Tables 4–7 above and Tables 9 and 10. It should be noted that both the Federal and ADFG harvest ticket systems account for reported harvest and may not reflect actual harvest, especially for some rural areas of the state where compliance with the ADFG harvest ticket system varies (cf. Andersen and Alexander 1992). Household surveys have been found to be a more accurate mechanism for assessing the actual harvests of large wildlife species. When available, this information is provided below.

Cooper Landing: Cooper Landing has a population of 289 (ADCRA 2011; see **Table 8**), is located along the Sterling Highway in Unit 7, and connected by the Sterling Highway to Unit 15A and 15B (see **Unit**

7 and 15 maps). In a household survey conducted in Cooper Landing from August 1990 through July 1991, Seitz et al. (1992) found that moose were the most widely used land mammal. Forty-two percent of the households used moose, 28 percent hunted moose, and 10 percent harvested moose. In 1990, the estimated community harvest of moose was 10 animals, or 19 pounds of meat per capita.

Between 1985 and 2009, the cumulative reported harvest of moose in Units 15A and 15B by Cooper Landing residents' was 8 moose in Unit 15A and 7 moose in Unit 15B, representing 10% of the community's total harvest statewide (**Tables 9 and 10;** USFWS 2011). Of the total moose harvest statewide, Cooper Landing residents harvested a cumulative total of 67 moose (47% of the total harvest) in Unit 7, which is where Cooper Landing is located (**Table 9**; USFWS 2011). From 2004 to 2009, Cooper Landing residents have been issued an average of 4 Federal and 4 State permits a year for moose in Unit 15, with harvests of an average of 1 and 2 moose respectively in Unit 15 (**Table 11**). Subsistence use area mapping conducted in 1981 by ADF&G showed that the moose harvest moose area from 1972 to 1982 for Cooper Landing included Unit 7, Unit 15A and 15B (USFWS 1993:Map VIII-1). The Federal Subsistence Board recognized residents of Cooper Landing's customary and traditional use of moose in Unit 15A and 15B in 2010. (Cooper Landing did not request a customary and traditional use determination in Unit 15C.)

Ninilchik: Ninilchik has a population of 1,476 (ADCRA 2011; see **Table 8**) and is located along the Sterling Highway in Unit 15C (see **Unit 15 map**). Moose is the most widely used land mammal by residents of Ninilchik, comprising 81% of Ninilchik's large mammal harvest (ADF&G 2011). Ninilchik residents are the primarily harvesters of moose in Unit 15C with 754 total moose reported harvested between 1985 and 2009. Of Ninilchik's total harvest during this time period, 75% (754) was from Unit 15C, 3% (27) from Unit 15B, and 1% (11) occurred in Unit 15A (**Table 10**). Of those communities with a positive customary and traditional use determination in Unit 15, Ninilchik residents also had the highest average of both State and Federal permits issued in Unit 15, with an average of 153 State permits and 82 Federal permits issued from 2004 to 2009 and 30 and 6 harvested (**Table 11**). Ninilchik residents also harvested a total of 217 moose outside of Unit 15 during this time period (**Table 10**; USFWS 2011). Mapping of Ninilchik's large mammal harvest area includes all Unit 15 (NTC 1994).

Nanwalek: Nanwalek (previously named English Bay) has a population of 254 (ADCRA 2011; see **Table 8**). Located on the southernmost edge of Kachemak Bay where it converges with Cook Inlet in proximity to the Gulf of Alaska in Unit 15C (see **Unit 15 map**), Nanwalek is five miles from Port Graham. Nanwalek is accessible only by air or boat. Moose hunting by Nanwalek residents has occurred primarily in the vicinity of the village (Stanek 1985:177). When moose hunting occurred elsewhere, it was in conjunction with other subsistence harvesting activities such as bear and waterfowl hunting, berry picking, and fishing. The combining of multiple activities increased the overall efficiency of the hunting trip (ADF&G 1992:1). Between 1985 and 2009, the total reported harvest of moose by Nanwalek residents has occurred entirely within Unit 15C and only once have hunters received permits to harvest moose in Unit 15A or 15B (see **Table 10**). Nanwalek residents have not applied for a Federal permit to harvest moose in Unit 15 from 2004 to 2009 and have only once applied for a State permit resulting in no harvest (**Table 11**). From 2004 to 2009, Nanwalek residents were not issued Federal permits to harvest moose in Unit 15. During the same time period, an average of 1 State permit has been issued with an average of no moose harvested (**Table 11**). Consistent with the harvest reporting, subsistence use area conducted in 1981 by ADF&G showed that the moose harvest moose area from 1980 to 1992 for Nanwalek was in Unit 15C, in the area immediately surrounding the Nanwalek and Port Graham (USFWS 1993:Map II-2).

Table 9. The reported harvest of moose In Units 7 and 15 by communities included in the customary and traditional use determination, cumulative 1985-2009 (USFWS 2011).

Community	Unit of Residence	State Permits		Federal Permits		Any Permit	
		Number of hunters	Number of moose harvested	Number of hunters	Number of moose harvested	Number of hunters	Number of moose harvested
UNIT 7							
Cooper Landing[1]	7	484	67	17	1	501	68
Hope[2]	7	214	33	7	1	221	34
UNIT 15A							
Cooper Landing	7	64	8	3	0	67	8
Nanwalek	15C	0	0	1	0	1	0
Ninilchik	15C	66	9	46	2	112	11
Port Graham	15C	2	0	0	0	2	0
Seldovia	15C	54	12	22	3	76	15
UNIT 15B							
Cooper Landing	7	43	7	4	0	47	7
Nanwalek	15C	0	0	1	0	1	0
Ninilchik	15C	70	12	117	15	187	27
Port Graham	15C	0	0	0	0	0	0
Seldovia	15C	8	2	36	7	44	9
UNIT 15C							
Nanwalek	15C	64	15	0	0	64	15
Ninilchik	15C	3,285	730	128	24	3,413	754
Port Graham	15C	57	14	0	0	57	14
Seldovia	15C	365	48	6	1	371	49

Port Graham: Port Graham has a population of 177 (ADCRA 2011; see **Table 8**) and, like Nanwalek, is located on the southernmost edge of Kachemak Bay where it converges with Cook Inlet in proximity to the Gulf of Alaska in Unit 15C (see **Unit 15 map**). Port Graham is accessible only by air or boat. Moose hunting by Port Graham residents has occurred primarily in the vicinity of the village (Stanek 1985:177). From 2004 to 2009, Port Graham residents were not issued Federal permits to harvest moose in Unit 15. During the same time period, an average of 4 State permits have been issued for moose in Unit 15 with an average of 2 moose harvested (**Table 11**). Subsistence use area mapping conducted in 1981 by ADF&G showed that the moose harvest moose area from 1980 to 1992 for Nanwalek was in Unit 15C, in the area immediately surrounding the Nanwalek and Port Graham (USFWS 1993:Map II-2). Consistent with the moose harvest area map, of reported harvests, Port Graham residents harvested no moose in Units 15A and 15B between 1985 and 2009. During this same time period, one moose was harvested by a Port Graham resident outside of Unit 15. There was one attempt to harvest a moose in Unit 15A (**Table 9;** USFWS 2011).

Seldovia: Seldovia has a population of 255 (ADCRA 2011; see **Table 8**) and is located on the mouth of Seldovia Bay at the southwestern edge of Kachemak Bay (see **Unit 15 map**) in Unit 15C. Seldovia is accessible only by air or boat. Seldovia residents' moose harvests in Unit 15 are primarily

Table 10. The reported harvest of moose in Unit 15 compared to the reported harvest of moose statewide by communities included in the customary and traditional use determination, cumulative 1985-2009 (USFWS 2011).

Community	Unit of Residence	Number of hunters using	Number of moose harvested	Number of hunters	Number of moose harvested	Percentage of hunters using subunit	Percentage of moose harvested in subunit
		UNIT 15A		**STATEWIDE**		**UNIT 15A**	
Cooper Landing[1]	7	67	8	1,607	143	4%	6%
Nanwalek	15C	1	0	100	15	1%	0%
Ninilchik	15C	112	11	7,766	1,009	1%	1%
Port Graham	15C	2	0	113	15	2%	0%
Seldovia	15C	76	15	1,522	212	5%	7%
		UNIT 15B		**STATEWIDE**		**UNIT 15B**	
Cooper Landing	7	47	7	1,607	143	3%	5%
Nanwalek	15C	1	0	100	15	1%	0%
Ninilchik	15C	187	27	7,766	1,009	2%	3%
Port Graham	15C	0	0	113	15	0%	0%
Seldovia	15C	44	9	1,522	212	3%	4%
		UNIT 15C		**STATEWIDE**		**UNIT 15C**	
Nanwalek	15C	64	15	100	15	64%	100%
Ninilchik	15C	3,413	754	7,766	1,009	44%	75%
Port Graham	15C	57	14	113	15	50%	93%
Seldovia	15C	371	49	1,522	212	24%	23%
		UNITS 15 TOTAL		**STATEWIDE**		**UNITS 15 TOTAL**	
Cooper Landing	7	114	15	1,607	143	7%	10%
Nanwalek	15C	2	0	100	15	2%	0%
Ninilchik	15C	3,712	792	7,766	1,009	48%	78%
Port Graham	15C	59	14	113	15	52%	93%
Seldovia	15C	491	73	1,522	212	32%	34%

in Unit 15C, but there are also reported harvests and use of Unit 15A and 15B. Between 1985 and 2009, Seldovia residents harvested a total of 15 moose in Unit 15A, 9 moose in Unit 15B, and 49 in Unit 15C and 76 hunted (but weren't successful) in Unit 15A and 44 hunted in Unit 15B (**Table 9;** USFWS 2011). During this same time period, Seldovia residents also harvested a total of 139 moose outside of Unit 15. From 2004 to 2009, Seldovia residents have been issued an average of 9 Federal and 8 State permits a year with harvests of an average of 1 and 2 moose respectively in Unit 15 (**Table 11**). Mapping of Seldovia moose harvest area was not available, but Reed (1985) indicated that the primary moose harvest area in 1985 was in the vicinity of Seldovia.

Table 11. Average permits issued for individuals with customary and traditional use determination in Unit 15 from 2004 to 2009 (USFWS 2011).

State Permits — Unit 15			
Community	**Issued**	**Hunted**	**Kill**
Nanwalek	1	1	0
Port Graham	**4**	**4**	**2**
Seldovia	8	8	2
Cooper Landing	**4**	**4**	**1**
Ninilchik	153	153	30
Total	**170**	**170**	**35**

Federal Permits — Unit 15			
Community *	**Issued**	**Hunted**	**Kill**
Seldovia	9	7	1
Cooper Landing	4	3	1
Ninilchik	82	53	6
Total	**95**	**63**	**8**
*** No Federal permits have been issued to residents of Port Graham or Nanwalek**			

State Permits — Statewide			
Community	**Issued**	**Hunted**	**Kill**
Nanwalek	**2**	**1**	**0**
Port Graham	**6**	**4**	**2**
Seldovia	**35**	**23**	**7**
Cooper Landing	**58**	**28**	**5**
Ninilchik	**350**	**194**	**43**
Total	**451**	**250**	**57**

2. Local Residency

With the exception of Cooper Landing, all of the communities under consideration in this Section 804 analysis are within Unit 15C. Cooper Landing is located in Unit 7, but is situated approximately 5 miles from the boundary between Unit 7 and Unit 15A. Cooper Landing is accessible by road to portions of Unit 15 (**Unit 15 map**). There are large portions of Unit 15 that are not road accessible (see Unit 15 map). There are no Federally qualified rural communities in Unit 15A or 15B. Ninilchik is accessible by road to portions of Unit 15. Seldovia is not accessible by road, but the State ferry runs three times a week year-round between Seldovia and Homer, which is road connected to Unit 15, and during the summer months there are private passenger ferries and water taxis that run multiple times a day between Seldovia and Homer. Nanwalek and Port Graham are within Unit 15C, but are not accessible by road to Unit 15A or 15B. In addition, there are no passenger boat services, including the State ferry, to and from Nanwalek and Port Graham. All transportation in and out of Nanwalek and Port Graham is by private boat or air.

3. Availability of Alternative Resources

All of the communities addressed in this Section 804 analysis harvest subsistence resources and rely on the resources available to them (USFWS 1993). As in all of rural Alaska, resources vary according to geographic location of the community and species availability. Subsistence economies are generally flexible and opportunistic: if some resources are not available during one hunting season, then others are sought. All of the communities under consideration in this analysis have a history of harvesting land mammals other than moose, including: caribou, goat, sheep, black and brown bear. As noted above, however, moose is the most widely used large land mammal by all of these communities (Fall 1992, NTC 1994, Reed 1985, Seitz et al. 1992, Stanek 1985, USFWS 1993).

Cooper Landing residents use alternative places to harvest moose outside of Unit 15A and 15B, as evidenced by the fact that only 10% of their total moose harvest between1985 and 2009 occurred in Unit 15A and 15B. Further, during the same time period, 48% of Cooper Landing's moose harvest occurred in Unit 7 (**Tables 9 and 10**).

Ninilchik residents are more dependent on harvesting moose in Unit 15, as evidenced by the fact that 78% of their total harvest occurred in Unit 15 (1% in Unit 15A, 3% in Unit 15B, and 75% in Unit 15C) during the period 1985–2009. Only 22% of Ninilchik residents harvest moose outside of Unit 15 during this same period (**Tables 9 and 10**).

Seldovia residents also appear to have alternative areas to harvest moose outside of Unit 15 as indicated by their harvest history between 1985 and 2009: only 34% of their total harvest has been in Unit 15—7% in Unit 15A, 4% in Unit 15B, and 23% in Unit 15C.

Of the affected communities in this analysis, Port Graham and Nanwalek are the only communities that do not report harvesting moose outside of their subunit, with one exception, thus it could be that there are few or no other alternatives for harvesting moose outside of Unit 15C for these communities. This is likely because of the distance and the high cost of travel to other parts of the state or to Unit 15A and 15B.

Summary of Section 804 Analysis

If Federal public lands were to be closed to non-Federally qualified users, and there was still insufficient moose for Federally qualified users, then the following prioritization could be implemented based on the findings of the Section 804 analysis.

Unit 15A and 15B: Cooper Landing, Ninilchik, and Seldovia demonstrate the highest dependency on moose harvested in Unit 15A and 15B and the highest level of moose harvest effort among communities that attempted to harvest moose and harvested moose in Unit 15A and 15B between 1985 and 2009. In addition to a the number of hunters using Unit 15A and 15B, Cooper Landing and Ninilchik's moose harvest areas encompass Unit15A and 15B. Cooper Landing and Ninilchik are the closest to Unit 15A and 15B. Nanwalek and Port Graham did not report harvests in Unit15A and 15B (with one exception) and their use areas are not within Unit 15A and 15B. if Federal public lands were closed to non-Federally qualified users in Unit 15A and 15B, and it was necessary to further restrict amongst Federally qualified subsistence users, moose harvests could be closed to all users except residents of Cooper Landing, Ninilchik, and Seldovia.

Unit 15C: Ninilchik, Seldovia, Port Graham, and Nanwalek demonstrate the highest dependency on moose harvested in Unit 15C and the highest level of moose harvest effort among communities that attempted to harvest moose in Unit 15C between 1985 and 2009. These communities are located

within Unit 15C and their moose harvest use areas are within Unit 15C. For these 4 communities, the percentage of the total reported harvests between 1985 and 2009 in Unit 15C have been 100%, 93%, 75%, and 23% respectively for Nanwalek, Port Graham, Ninilchik, and Seldovia. Harvest effort indicates a similar pattern. Cooper Landing residents do not have a customary and traditional use determination for Unit 15C. If Federal public lands were closed to non-Federally qualified users in Unit 15C, and it was necessary to further restrict amongst Federally qualified subsistence users, moose harvests could be closed to all users except residents of Ninilchik, Seldovia, Port Graham, and Nanwalek.

While the alternative to close Federal public lands to non-Federally qualified users was considered and an ANILCA Section 804 analysis conducted, this alternative is not recommended for adoption because closing some or all Federal Lands to non-Federally qualified subsistence users could place additional hunting pressure on State managed lands or the remaining subunits, negating conservation benefits for those areas.

Eliminate spike/fork antler restriction but maintain the 50" or 3 brow tine antler restriction. The State maintained the drawing hunt for Unit 15B-East that still has 50" or 3 or more brow tines, but changed all other hunts to 4 brow tines.

While prolonged harvests of large antlered bulls may reduce genetic variability over time and cause an irreversible loss of alleles specific to antler features (Hundertmark and Bowyer 1998, Bowyer et al. 2002), this is a two-year, short-term management strategy, to increase the bull:cow ratio as much as possible during this time frame. The ADF&G has a drawing hunt for Unit 15B East and has maintained the 50" or 3-brow tine antler restriction for 50 drawing permits from Sept. 1 to Sept 30. These drawing permits are available to both Federally qualified users and non-Federally qualified users. The Federal Subsistence Board adopted WSA11-02 to align with State regulations to change the antler restrictions from 3 brow tines to 4 brow tines and removed the spike-fork option to harvest a moose in Units 7 and 15 to address conservation concerns in the shortest timeframe.

Effects of the Proposal

WP12-30

If this Proposal were adopted, the harvest regulation for moose in Units 7 and 15 would change, removing the spike fork option and shortening the season from Aug. 10 – Sept. 20 to Aug. 22 – Sept. 20. This would affect the communities of Cooper Landing, Ninilchik, Nanwalek, Port Graham, and Seldovia who have a positive customary and traditional use determination for moose in Unit 15 and residents of Hope for Unit 7-remainder.

The removal of the spike-fork harvest option and shortening the season would likely reduce Federal harvest. However, the continued harvest of yearling bulls will compromise the increase in recruitment to reach bull:cow ratio objectives and will adversely affect the moose population in Units 7 and 15. Currently, there is a decline in the bull:cow ratio and spike fork moose constitutes the bulk of the harvest in Unit 15. Eliminating the spike-fork harvest within Units 7 and 15 will allow for increased recruitment for yearling bulls into the population to establish a higher bull:cow ratio over time. Finally, reducing the early season hunt by twelve days would decrease moose hunting opportunities for Federally qualified subsistence users.

WP12-31

If this Proposal were adopted, the harvest regulation for moose in Unit 15 would change removing the fork harvest option and shortening the season from Aug. 10 – Sept. 20 to Aug. 20 – Sept. 20. This would affect the communities of Cooper Landing, Ninilchik, Nanwalek, Port Graham, and Seldovia who have a positive customary and traditional use determination for moose in Unit 15.

The removal of the fork option would likely reduce Federal harvest, however; the continued harvest of yearling bulls will compromise the increase in recruitment to reach bull:cow ratio objectives and will negatively impact the moose population in Unit 15. Currently, there is a decline in the bull:cow ratio and a large portion of the harvests within Unit 15 are spike-fork moose. Determining how many of the spike-fork bulls were actually spike-only is impossible to discern from the database. Eliminating the fork antlered moose harvest within Unit 15 will allow for increased recruitment for yearling bulls into the population to establish a higher bull:cow ratio over time. In addition, reducing the early season hunt by ten days would decrease moose hunting opportunities for Federally qualified subsistence users.

The small harvest and low number of subsistence hunters participating in the Federal late season moose hunt in Units 15B and 15C suggests that reduction of the season is not necessary to protect the Kenai Peninsula moose population. It does, however, provide Federally qualified users an additional opportunity to meet their subsistence needs. If a conservation concern arises, the Kenai NWR Manager is authorized to close the October 20–November 10 late season.

WP12-30 and WP12-31

Approximately 2,643 people live in the five communities that have a positive customary and traditional use determination for moose in Units 7 and 15 (**Table 8**). If this Proposal is not adopted the Federal harvest limit for moose would allow for the harvest of spike-fork moose, which has been eliminated from the State harvest limit. This is expected to cause an increase in the number of Federally qualified subsistence users that would choose to hunt on Federal public lands with a Federal permit. From 1999 to 2010, the populations in the communities with customary and traditional use in Unit 7-remainder have increased 16% and the communities in Unit 15 have increased 54% (**Table 8**). A trend in the harvest of spike-fork moose by Federally qualified subsistence users has been steady (**Table 4**). However, it is expected that Federally qualified subsistence users would have a better success rate than individuals hunting under State regulations because the harvest limit would be less restrictive since the opportunity under State regulations has been removed.

The spike-fork, 50-inch or three brow tines on at least one antler restrictions are in place to provide adequate protection from over-harvest of breeding age bulls. As noted in the "Regulatory History" section of this analysis, there is a record on this issue from 1995–2001 from the Council and Board with review by District Court and Ninth Circuit Court of Appeals. The Ninth Circuit Court of Appeals held that "In deciding to apply the spike-fork/50 inch antler restriction to subsistence hunters, the Board took into account biological data suggesting that, despite the recovery in bull numbers, allowing subsistence users to hunt all bulls would reverse the gains and jeopardize subsistence opportunities over the long term." The Federal Subsistence Board's interpretation of the term "priority" as defined by ANILCA was reasonable and meant to balance the competing aims of subsistence use, conservation, and recreation; while at the same time providing subsistence hunters with a meaningful opportunity. The Ninth Circuit Court of Appeals held that "…the Board considered the relevant factors in concluding that the restrictions on subsistence users are necessary to protect the continued viability of the bull moose population in GMU 15…"

Harvest under State regulations is predominately by harvest ticket and reliant upon hunter reports to determine the number of hunters and actual harvest. Harvest under Federal regulations is by Federal registration permit which gives managers an understanding of the number of hunters, but is still reliant upon hunter reports to determine actual harvest. Requiring the sealing of antlers by within 10 days of harvest will allow for more accurate tracking of harvest of legal moose and thereby a better understand of the moose population on the Kenai Peninsula.

OSM PRELIMINARY CONCLUSION

Support Proposal WP12-30 and WP12-31 **with modification** to change the harvest limit to 1 antlered bull with 50-inch antlers or with 4 or more brow tines on either antler for both seasons, and add that antlers will be required to be inspected and sealed by an authorized representative[2].

The modified regulation should read:

Unit 7 remainder—Moose	
*1 antlered bull with ~~spike-fork or~~ 50-inch antlers or with ~~3~~**4** or more brow tines on either antler, by Federal registration permit only.* ***Antlers must be inspected and sealed by an authorized representative.***	*Aug. 10 – Sept. 20*
Unit 15A remainder, 15B and 15C—Moose	
*1 antlered bull with ~~spike-fork or~~ 50-inch antlers or with ~~3~~**4** or more brow tines on either antler, by Federal registration permit only.* ***Antlers must be inspected and sealed by an authorized representative.***	*Aug. 10 – Sept. 20*
Units 15B and 15C—Moose	
*1 antlered bull with ~~spike-fork or~~ 50-inch antlers or with ~~3~~**4** or more brow tines on either antler, by Federal registration permit only.* ***Antlers must be inspected and sealed by an authorized representative.*** *The Kenai National Wildlife Refuge Manager is authorized to close the Oct./Nov. season based on conservation concerns, in consultation with ADF&G and the Chair of the Southcentral Regional Advisory Council.*	*Oct. 20–Nov. 10*

Justification

While the current levels of moose harvest under Federal subsistence regulations are low within Unit 7-remainder and Unit 15, the percentage of spike-fork bulls that make up the total harvest by all users within those units is significant. If Federal subsistence regulations continue to allow the spike-fork and 3 brow tine option, current and additional Federally qualified subsistence users may choose to hunt with a Federal permit and adversely impact the productivity of the moose population. This change in antler restrictions is meant to be a short-term solution of approximately two years to allow the increase in bull:cow ratios in the shortest timeframe. A temporary special action may be submitted to change the regulations if the bull:cow ratio has rebounded before the next wildlife regulatory cycle. Skewed

[2] ADF&G can designate a Federal agency to inspect and seal the moose antlers.

age class ratios between mature and submature bulls may result in reduced genetic variability or fewer adult females conceiving during the first estrous cycle due to their hesitation to mate with young bulls. Eliminating the spike-fork option will allow bull:cow ratios to recover to management objectives more quickly thereby addressing conservation concerns. In addition, increasing the brow tine requirement to 4 brow tines will limit the number of large bulls harvested in the area while still allowing for a harvest opportunity of bulls with 50" antlers regardless of the number of brow tines and bulls with 4 brow tines with less than 50" antlers. The Federal season from Aug. 10 – Sept. 20 is 10 days longer than the State season and provides a subsistence priority. Federally qualified subsistence users have an extended early season and a late season that is not available to non-Federally qualified subsistence users. The Kenai NWR Manager is authorized to close the October 20–November 10 late season due to conservation concerns. Requiring the sealing of antlers by an authorized representative will allow for more accurate tracking of legal harvest to effectively manage the moose population on the Kenai Peninsula.

LITERATURE CITED

ADCRA. 2011. Community database online. http://www.commerce.state.ak.us/dca/commdb/ CF_BLOCK.htm/, retrieved July 29, 2011. Division of Community and Regional Affairs. Juneau, AK.

ADF&G. 1992. Seven criteria worksheet: moose – GMU 15C: Port Graham, Nanwalek (English Bay). Division of Subsistence, Alaska Department of Fish and Game. Juneau, AK.

ADF&G. 2008. The Alaska Board of Game Spring 2008 Meeting, February 29–March 10, 2008. Proposal 127, page 117. Fairbanks, AK.

ADF&G. 2007. Harvest reports. Internet: http://www.wildlife.alaska.gov/index.cfm.

Berg, E.E., K.M. Hillman, R.Dial, and A. DeRuwe. 2009. Recent woody invasion of wetlands on the Kenai Peninsula lowlands, south-central Alaska: a major regime shift after 18,000 years of wet Sphagnum-sedge peat recruitment. Canadian Journal of Forest Research 39:2033–2046.

DLWD. 2011. Department of Labor and Workforce Development Database. Internet: http://labor.alaska.gov/research/census/home.htm .

Fall, J., editor. 1992. Subsistence harvest and uses in seven Gulf of Alaska communities in the second year following the Exxon Valdez Oil Spill. Division of Subsistence, Alaska Department of Fish and Game. Anchorage, AK.

FSB. 1996a. Transcripts of Federal Subsistence Board proceedings, May 3, 1996. Office of Subsistence Management, USFWS. Anchorage, AK.

FSB. 1996b. Transcripts of Federal Subsistence Board proceedings, July 16, 1996. Office of Subsistence Management, USFWS. Anchorage, AK.

FSB. 1996c. Transcripts of Federal Subsistence Board proceedings, August 14, 1996. Office of Subsistence Management, USFWS. Anchorage, AK.

Klein, E. E.E. Berg, R. Dial. 2005. Wetland drying and succession across the Kenai Peninsula Lowlands, south-central Alaska. Canadian Journal of Forest Research 35:1931–1941.

Lieb, B. J. 2008. Harvest information system coordinator. Personal communication: phone. ADF&G. Juneau, AK.

McDonald, M.G. 2000. Unit 15A Northern Kenai Peninsula. Pages 17–18 in M.V. Hicks, ed. Management report of survey-inventory activities, 1 July 1999–30 June 2000. ADF&G Fed. Aid in Wildl. Rest. Prog. Rep. Proj. W-27-3, Study 1.0, Juneau, AK. 42 pages.

McDonough, T. 2004. Unit 15B and 15C moose management reports. Pages 209–215 and 216–223 in C. Brown, ed. Moose management report of survey and inventory activities, 1 July 2001–30 June 2003. ADF&G. Fed. Aid in Wildl. Rest. Prog. Rep. Proj. W-27-5 and W-33-1, Study 1.0, Juneau, AK. 180 pages.

McDonough, T. 2006. Unit 7 moose management reports. Pages 101–106 in P. Harper, ed. Moose management report of survey and inventory activities, 1 July 2003–30 June 2005. ADF&G, Juneau, AK.

Miller, S. 2011. Wildlife Biologist. Personal communication, Kenai NWR, Soldotna, AK.

Morton, J. 2007. Wildlife biologist. Personal communication. Kenai NWR, Soldotna, AK.

NTC (Ninilchik Traditional Council). 1994. Ninilchik subsistence survey 1994. On file, Ninilchik Traditional Council. Ninilchik, AK.

Reed, C. 1985. The role of wild resource use in communities of the Central Kenai Peninsula and Kachemak Bay, Alaska. Technical Paper No. 106. Division of Subsistence, Alaska Department of Fish and Game. Anchorage, AK.

Seitz, J., L. Tomrdle, and J. Fall. 1992. The Use of Fish and Wildlife in the Upper Kenai Peninsula Communities of Hope, Whittier, and Cooper Landing. Division of Subsistence, Alaska Department of Fish and Game. Anchorage, AK.

Selinger, J. 2005. Area wildlife biologist. Personal communication. ADF&G, Soldotna, AK.

Selinger, J. 2006. Unit 15A moose management report. Pages 199–214 in P. Harper, ed. Moose management report of survey and inventory activities, 1 July 2003–30 June 2005. ADF&G. Fed. Aid in Wildl. Rest. Prog. Rep. Proj. 1.0, Juneau, AK.

Selinger, J. 2008. Unit 15 moose management report. Pages 207–222 in P. Harper, editor. Moose management report of survey and inventory activities 1 July 2005–30 June 2007. Alaska Department of Fish and Game. Project 1.0. Juneau, Alaska.

Spraker, Ted. 2002. Unit 15A moose management report. Pages 193–203 in C. Healy, ed. Moose management report of survey and inventory activities, 1 July 1999–30 June 2001. ADF&G. Project 1.0, Juneau, AK.

Stanek, R. 1985. Patterns of wild resource use in English Bay and Port Graham, Alaska. Technical Paper No. 104. Division of Subsistence, Alaska Department of Fish and Game. Anchorage, AK.

USFWS 1993. Draft—Kenai Peninsula, Units 7 and 15, Customary and Traditional Use Determination Report. U.S. Fish and Wildlife Service, Office of Subsistence Management. December 8, 1993. Anchorage, AK.

USFWS. 1996. Kenai National Wildlife Refuge Moose/Habitat Management Plan. Anchorage, AK: U.S. Fish and Wildlife Service. 50 pgs.

USFWS. 2001. Kenai National Wildlife Refuge Fire Management Plan. Soldotna, Alaska. 58 pages.

USFWS. 2007. Subsistence Permit System. Internet: http://alaska.fws.gov/newpermits/.

USFWS. 2008. Wildlife harvest database. Microcomputer database, updated December 2007.

USFWS. 2011. Federal subsistence permit system. On file, Office of Subsistence Management, U.S. Fish and Wildlife Service. Anchorage, AK.

West, R. 2007. Refuge Manager, Kenai NWR. Personal communication. Kenai NWR, Soldotna, AK.

WP12-32 Executive Summary	
General Description	Proposal WP12-32 requests the season dates for the elder hunt and the joint minor/elder sheep hunts in Units 11 and 12 be changed from Sept. 21 – Oct. 20 to Aug. 1 – Aug. 9. *Submitted by the Cheesh-na Tribal Council*
Proposed Regulation	**Units 11 and 12 — Sheep** *Unit 11 — 1 sheep.* — *Aug. 10 – Sept. 20* *Unit 11 Elder Hunt — 1 sheep by Federal registration permit only by persons 60 years of age or older.* — *~~Sept. 21 – Oct. 20.~~* ***Aug. 1 – Aug. 9*** *__.26(n)(11)(ii) A joint permit may be issued to a pair of a minor and an elder to hunt sheep during the ~~Sept. 21–Oct. 20~~* ***Aug. 1 – Aug. 9*** *hunt. The following conditions apply:* *(A) The permittees must be a minor aged 8 to 15 years old and an accompanying adult 60 years of age or older;* *(B) Both the elder and the minor must be Federally qualified subsistence users with a positive customary and traditional use determination for the area they want to hunt;* *(C) The minor must hunt under the direct immediate supervision of the accompanying adult, who is responsible for ensuring that all legal requirements are met;* *(D) Only one animal may be harvested with this permit. The sheep harvested will count against the harvest limits of both the minor and accompanying adult.* *Unit 12 — 1 ram with full curl or larger horn.* — *Aug. 10 – Sept. 20* *Unit 12 Elder Hunt — that portion within Wrangell-St. Elias National Park and Preserve — 1 ram with full curl horn or larger by Federal registration permit only by persons 60 years of age or older.* — *~~Sept. 21 – Oct. 20~~* ***Aug. 1 – Aug. 9*** *__.26(n)(12)(ii) A joint permit may be issued to a pair of a minor and an elder to hunt sheep during the ~~Sept. 21–Oct. 20~~* ***Aug. 1 – Aug. 9*** *hunt. The following conditions apply:*

continued on next page

WP12-32 Executive Summary *(continued)*	
Proposed Regulation (Continued)	*(A) The permittees must be a minor aged 8 to 15 years old and an accompanying adult 60 years of age or older;* *(B) Both the elder and the minor must be Federally qualified subsistence users with a positive customary and traditional use determination for the area they want to hunt;* *(C) The minor must hunt under the direct immediate supervision of the accompanying adult, who is responsible for ensuring that all legal requirements are met;* *(D) Only one animal may be harvested with this permit. The sheep harvested will count against the harvest limits of both the minor and accompanying adult.*
OSM Preliminary Conclusion	**Support**
Southcentral Regional Council Recommendation	
Eastern Interior Regional Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	**Support** Proposal WP12-32 **with modification**. The department supports liberalizing the Elder Hunt by advancing the season start date from to September 21 to August 10 and retaining the established season closure date of October 20 for the described Federal public lands in Units 11 and 12. Adoption of this modification will provide Federal subsistence users who qualify and choose to participate in the Elders Hunt an additional 41 days of opportunity to harvest a sheep during an unprecedented 70 day August 10 through October 20 summer/fall sheep hunting season. The department also recommends further defining the Unit 11 Elder Hunt harvest limit be to one sheep, lambs and ewes accompanied by lambs may not be taken.
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP12-32

ISSUES

Proposal WP12-32, submitted by the Cheesh-na Tribal Council, Chistochina, Alaska, requests the season dates for the elder hunt and the joint minor/elder sheep hunts in Units 11 and 12 be changed from Sept. 21 – Oct. 20 to Aug. 1 – Aug. 9.

DISCUSSION

The proponent states that the elder hunt provisions were intended to provide a hunting opportunity that is accessible to elders so they can pass their knowledge of traditional sheep hunting customs and practices on to local youth. The current season has snow conditions that make it difficult for elders to travel, and the proposed time changes would be during a time of year when travel conditions are less difficult. The proponent also felt that the shorter recommended season would offset any increase in participation in the hunt. The season would be shortened from 27 days to 9 days.

Existing Federal Regulations

Units 11 and 12 — Sheep

Unit 11 — 1 sheep.	*Aug. 10 – Sept. 20*
Unit 11 Elder Hunt — 1 sheep by Federal registration permit only by persons 60 years of age or older.	*Sept. 21 – Oct. 20*
__.26(n)(11)(ii) A joint permit may be issued to a pair of a minor and an elder to hunt sheep during the Sept. 21–Oct. 20 hunt. The following conditions apply:	
(A) The permittees must be a minor aged 8 to 15 years old and an accompanying adult 60 years of age or older;	
(B) Both the elder and the minor must be Federally qualified subsistence users with a positive customary and traditional use determination for the area they want to hunt;	
(C) The minor must hunt under the direct immediate supervision of the accompanying adult, who is responsible for ensuring that all legal requirements are met;	
(D) Only one animal may be harvested with this permit. The sheep harvested will count against the harvest limits of both the minor and accompanying adult.	
Unit 12 — 1 ram with full curl or larger horn.	*Aug. 10 – Sept. 20*

Unit 12 Elder Hunt — that portion within Wrangell-St. Elias National Park and Preserve — 1 ram with full curl horn or larger by Federal registration permit only by persons 60 years of age or older.	*Sept. 21 – Oct. 20*
__.26(n)(12)(ii) A joint permit may be issued to a pair of a minor and an elder to hunt sheep during the Sept. 21–Oct. 20 hunt. The following conditions apply:	
(A) The permittees must be a minor aged 8 to 15 years old and an accompanying adult 60 years of age or older;	
(B) Both the elder and the minor must be Federally qualified subsistence users with a positive customary and traditional use determination for the area they want to hunt;	
(C) The minor must hunt under the direct immediate supervision of the accompanying adult, who is responsible for ensuring that all legal requirements are met;	
(D) Only one animal may be harvested with this permit. The sheep harvested will count against the harvest limits of both the minor and accompanying adult.	

Proposed Federal Regulations

Unit 11 — 1 sheep.	*Aug. 10 – Sept. 20*
Unit 11 Elder Hunt — 1 sheep by Federal registration permit only by persons 60 years of age or older.	*~~Sept. 21 – Oct. 20.~~* ***Aug. 1 – Aug. 9***
__.26(n)(11)(ii) A joint permit may be issued to a pair of a minor and an elder to hunt sheep during the ~~Sept. 21–Oct. 20~~ ***Aug. 1 – Aug. 9*** *hunt. The following conditions apply:*	
(A) The permittees must be a minor aged 8 to 15 years old and an accompanying adult 60 years of age or older;	
(B) Both the elder and the minor must be Federally qualified subsistence users with a positive customary and traditional use determination for the area they want to hunt;	
(C) The minor must hunt under the direct immediate supervision of the accompanying adult, who is responsible for ensuring that all legal requirements are met;	
(D) Only one animal may be harvested with this permit. The sheep harvested will count against the harvest limits of both the minor and accompanying adult.	
Unit 12 — 1 ram with full curl or larger horn.	*Aug. 10 – Sept. 20*

Unit 12 Elder Hunt — that portion within Wrangell-St. Elias National Park and Preserve — 1 ram with full curl horn or larger by Federal registration permit only by persons 60 years of age or older.	*~~Sept. 21 – Oct. 20~~* ***Aug. 1 – Aug. 9***

__.26(n)(12)(ii) A joint permit may be issued to a pair of a minor and an elder to hunt sheep during the ~~Sept. 21–Oct. 20~~ ***Aug. 1 – Aug. 9*** *hunt. The following conditions apply:*

(A) The permittees must be a minor aged 8 to 15 years old and an accompanying adult 60 years of age or older;

(B) Both the elder and the minor must be Federally qualified subsistence users with a positive customary and traditional use determination for the area they want to hunt;

(C) The minor must hunt under the direct immediate supervision of the accompanying adult, who is responsible for ensuring that all legal requirements are met;

(D) Only one animal may be harvested with this permit. The sheep harvested will count against the harvest limits of both the minor and accompanying adult.

Existing State Regulations

Residents and non-residents

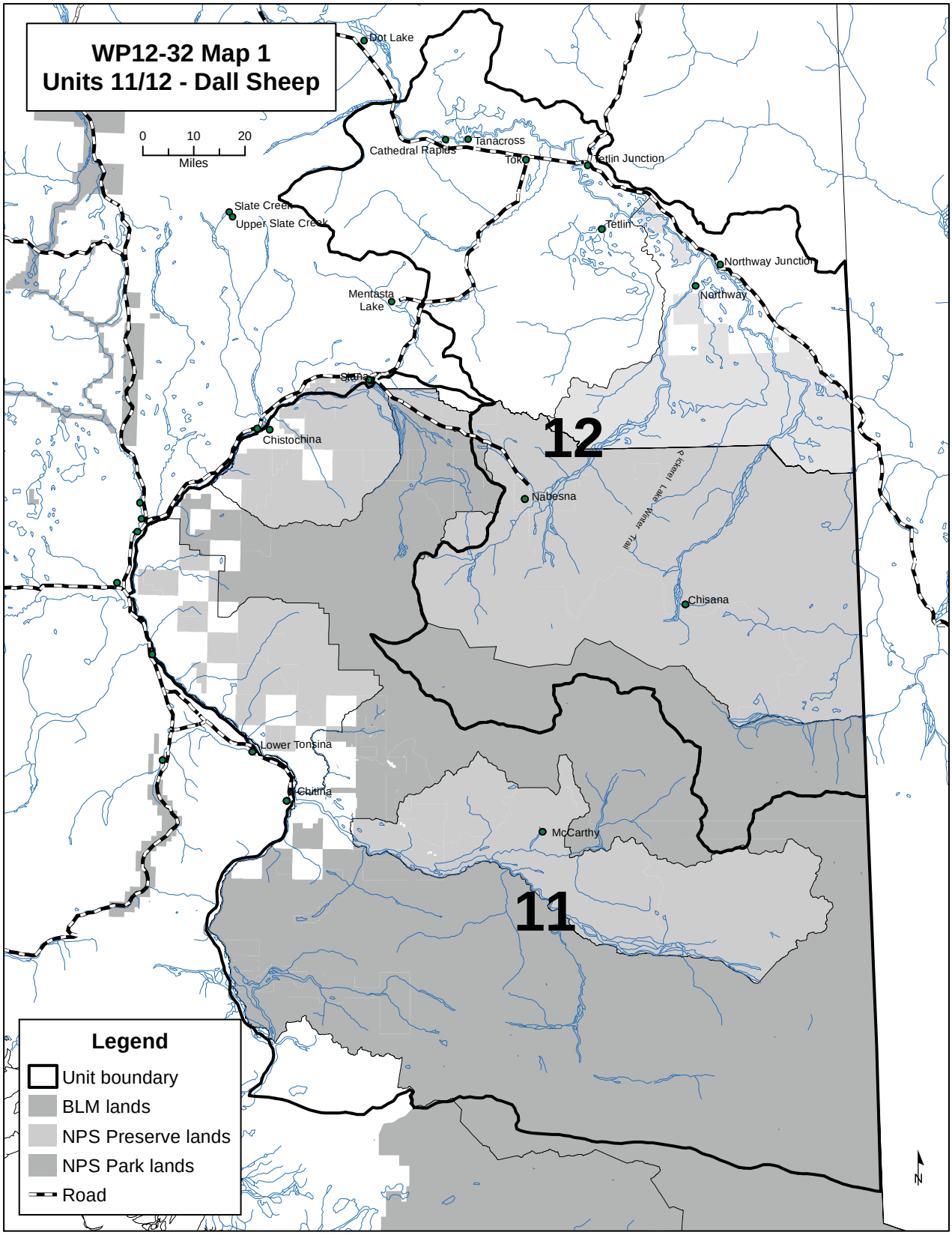
Unit 11 — One ram with full curl or larger horn.	*Aug. 10 – Sept. 20*
Unit 12 — within Tok Management area	*Aug. 10 – Aug. 25*
One ram with full-curl horn or larger every four regulatory years by permit (Drawing)	*Aug. 26 – Sept. 20*
Unit 12 — remainder	
One ram with full-curl horn or larger	*Aug. 10 – Sept. 20*

Extent of Federal Public Lands

Federal public lands in Unit 11 are comprised of Wrangell-St. Elias National Park/Preserve (78.9%) and a small portion of the Chugach National Forest (2.1%). Approximately 70% of the sheep are found on lands of the Wrangell-St. Elias National Preserve. Federal public lands in Unit 12 are comprised of Wrangell-St. Elias National Park/Preserve (47.7%) and the Tetlin National Wildlife Refuge (10.7%). In Unit 12, this proposal would only apply to Federal public lands within the Wrangell-St. Elias National Park and Preserve (**Map 1**).

Special Requirements for Park Service Lands

Under the guidelines of ANILCA, National Park Service regulations identify qualified local rural subsistence users in National Parks and Monuments by: 1) identifying resident zone communities which include a significant concentration of people who have customarily and traditionally used subsistence


WP12-32 Map 1
Units 11/12 - Dall Sheep
0
10
20
Miles
Dot Lake
Tanacross
Cathedral Rapids
Tok
Tetlin Junction
Slate Creek
Upper Slate Creek
Tetlin
Northway Junction
Northway
Mentasta Lake
Slana
Chistochina
12
Nabesna
Chisana
Lower Tonsina
Chitina
McCarthy
11
Legend
Unit boundary
BLM lands
NPS Preserve lands
NPS Park lands
Road
N

resources on park lands; and 2) identifying and issuing subsistence use permits to individuals residing outside of the resident zone communities who have a personal or family history of subsistence use.

Customary and Traditional Use Determinations

In Unit 11, north of the Sanford River, residents of Unit 12 and the communities and areas of Chistochina, Chitina, Copper Center, Dot Lake, Gakona, Glennallen, Gulkana, Healy Lake, Kenny Lake, Mentasta Lake, Slana, McCarthy/South Wrangell/South Park, Tazlina, and Tonsina; also residents along the Nabesna Road — milepost 0–46; and residents along the McCarthy Road — milepost 0–62 have a positive customary and traditional use determination for sheep. Communities and areas having customary and traditional use of sheep in the remainder of Unit 11 are Chistochina, Chitina, Copper Center, Gakona, Glennallen, Gulkana, Kenny Lake, Mentasta Lake, Slana, McCarthy/South Wrangell/South Park, Tazlina, and Tonsina; also residents along Tok Cutoff Road (mileposts 79–110 Mentasta Pass); the Nabesna Road (milepost 0–46); and residents along the McCarthy Road (milepost 0–62).

In Unit 12, residents of Unit 12 and the communities of Chistochina, Mentasta Lake, Dot Lake, and Healy Lake have a positive customary and traditional use determination for sheep.

Regulatory History

In 1998, the Federal Subsistence Board created a late sheep season in Unit 11 for persons 60 years of age or older. This season was extended one month beyond the regular sheep season, when sheep are at lower elevations to allow the opportunity for those "elders who are still capable of hunting, but cannot climb high enough into the mountain to find sheep during the early season, to continue to hunt and pass on traditional knowledge about sheep hunting to younger family members (FWS 1998)."

During 2004 two proposals were considered which addressed sheep hunts in Unit 11 and Unit 12. WP04-24 requested that designated hunting be allowed for the late season elder hunt in Unit 11. This proposal was opposed by the Southcentral Alaska and Eastern Interior Regional Advisory Councils and rejected by the Federal Subsistence Board (FSB 2004). It was felt that the season was established to allow elders the opportunity to hunt and pass on their knowledge. During consideration of Proposal WP04-24, there was discussion during both Council meetings regarding the opportunity for youth to accompany the elders, but it was realized that the proposal under consideration dealt only with designated hunting provisions and there was a lack of detail about the provisions for allowing youth to accompany elders during the late sheep season. WP04-80 requested a new season that paralleled the Unit 11, late season hunt for elders. During Council deliberations on the proposal it was suggested by some that the youth provisions also be included for Unit 12. The eventual recommendation from both Councils was to support the late season hunt in Unit 12 for elders only, as originally proposed, and consider the youth provisions when more details were available (EIRAC 2004, SCRAC 2004). In May 2004, the Federal Subsistence Board adopted proposal WP04-80 for the late sheep season for elders only in Unit 12, consistent with the Councils' recommendation (FSB 2004).

The Cheesh'na Tribal Council submitted WP05-06 with the goal of allowing elders "to resume their traditional practices of teaching their grandchildren how to hunt sheep." The proponent acknowledged that WP04-80 established the late season to allow only elders to hunt when the sheep would be more accessible to the elders, but they also want to allow grandchildren and similar younger relatives to accompany the elders for educational purposes. They stated that current regulation "neglects one aspect of the traditional instructional process, that the young people should have the opportunity to take the animal, rather than simply observing their elders doing so." WP05-06 was adopted by the Board at its May 2006 meeting and established the current elder hunt with the season of Sept. 21 – Oct. 20.

Customary and Traditional Practices

The transmission of hunting knowledge and skills from one generation to another is listed as one of the factors used to make customary and traditional use determinations. Written documentation of the special relationships between elders and youth and the teaching of hunting and fishing skills is provided in the summaries prepared by the National Park Service (NPS 1994, 1995). Current examples of these practices are provided in the curriculum guide materials prepared by the Mt. Sanford Tribal Consortium. This curriculum guide provides guidance to teachers about the role of elders in traditional learning and identifies areas where elders can be consulted for traditional knowledge on the local resources and customs (MSTC 2004).

Biological Background

In July 2001, an aerial population composition count was conducted between the Nabesna and Chisana Rivers north of Cooper and Notch Creek (count area 6) and east of Snag and Carl Creeks to the Canadian border north of Beaver Creek (count area 7), the Wrangell-St. Elias Preserve portions of Unit 12. The total number of sheep for these two count areas was estimated at 1,166. This count represents a decline from the 1997 and 1998 composition counts, which may be due to adverse weather conditions during the 1999 and 2000 winters. The Alaska Department of Fish and Game management report for this period concluded that the State's goals and objectives for Dall sheep in Unit 12 were met (Gardner 2002).

In 2003 and 2007, ADF&G flew aerial surveys within Wrangell-St Elias Park and Preserve and survey data was separated into different count areas (CA) within the Preserve and Park based on the different hunting regulations for these areas. The CA3 West lies in the north Wrangell Mountains within the Upper Copper River drainage and is within Park boundaries and is utilized by local subsistence hunters using 4 – wheelers for access making it a popular area to hunt. During the last survey within this area (CA3) in 2007, there were 32 rams:100 ewes (Schwanke 2011, pers. comm.).

In areas within the Wrangell-St Elias Park and Preserve that are more difficult to access for subsistence users, Becky Schwanke reported in the 2004–2007 Dall Sheep Management Report that "In the Preserve (CA 23 West), the ram to ewe ratios are consistently low to moderate, averaging 25 rams:100 ewes since 2001. The Park (CA 23 East) receives less hunting pressure due to aircraft and residency restrictions, and is reflected in the average 64 rams:100 ewes since 2001. The percentage of rams classified as full-curl or greater follow a similar pattern with 23% in the Preserve and 41% in the Park for the same time period" (Schwanke 2008). Hunting in the National Preserve (CA 23 West) occurs under both Federal subsistence and State of Alaska general hunting regulations. The Park area (CA 23 East) is managed under Federal Subsistence hunting regulations. Fixed wing aircraft may be used to access the preserve for the purpose of harvesting wildlife, but not the park. ORVs may be used for access in both the park and preserve, however, non-Federally qualified subsistence users are restricted to established ORV trails and must obtain a permit.

Harvest History

The harvest of sheep on National Park lands is limited to Federal subsistence hunting by rural residents of designated communities in Units 11, 13, and a portion of 12 and 20D. Rural residents can also hunt in the National Preserve under Federal subsistence regulations and any resident can hunt under State regulations. On National Preserve lands, non-residents can hunt under State regulations if accompanied by an Alaska licensed guide or an Alaska resident 19 years or older who is within the second degree of kindred.

From 2004–2010, 132 permits were issued for the Unit 11 elder only and elder/minor hunts; 44 people reported hunting and two sheep were harvested. During the same time period, 68 permits were issued for the Unit 12 elder only and elder/minor sheep hunts and 23 individuals reported hunting and no sheep were reported harvested (FWS 2011).

Effects of the Proposal

If this proposal is adopted, the season for the Elder hunt would be shortened by 21 days and the season dates would change from Sept. 21 – Oct. 20 to Aug. 1 – Aug. 9. The earlier timing of the hunt would be 9 days prior to the opening of the hunt for other users and should provide greater accessibility to elders so they can pass their knowledge of traditional sheep hunting customs and practices on to local youth with less competition from other users. Although the season would be shifted earlier, which may make it more desirable and possibly increase the number of permittees, the proposed shorter season should offset the potential increase of hunters and limit an increase to harvest. In addition, the weather would have little effect of having a wanton waste of harvesting the meat from the animal, since the average high and low temperatures from 2008–2010 are similar between the first week (60° high, 47° low) and second week (62° high, 51° low) of August (Weather Underground 2011: Nabesna (PABN) weather station). However input from the Southcentral Alaska Regional Advisory Council would be appreciated for their knowledge on whether sheep will be low enough for the elders to access during this time of year. In 1998, this season was extended one month beyond the regular sheep season, when sheep were at lower elevations to allow the opportunity for those "elders who are still capable of hunting, but cannot climb high enough into the mountain to find sheep during the early season, to continue to hunt and pass on traditional knowledge about sheep hunting to younger family members. Therefore, while there might not be snow conditions that make it difficult for elders to hunt, the sheep may be at the higher elevations and require strenuous activity by elders to access sheep.

OSM PRELIMINARY CONCLUSION

Support Proposal WP12-32

Justification

The Elder hunt allows a person 60 years of age or older to harvest a sheep by Federal Registration permit. The unit-specific regulation also allows a joint Elder/Minor hunt by Federal permit and provides a hunting opportunity that is accessible to elders so they can pass their knowledge of traditional sheep hunting customs and practices on to local youth is also available for this time period. Reducing the Elder hunt season, and the subsequent unit-specific regulation associated with the joint Elder/Minor hunt, would allow elders and minors to travel during a time of year when travel conditions are less difficult. In addition, the earlier timing of the hunt would be 9 days prior to the opening of the hunt for other users and should provide greater accessibility to elders so they can pass their knowledge of traditional sheep hunting customs and practices on to local youth with less competition from other users.

LITERATURE CITED

EIRAC. 2004. Transcripts of the Eastern Interior Subsistence Regional Advisory Council proceedings, February 27, 2004. Office of Subsistence Management, FWS. Anchorage, AK.

FWS. 1998. Federal Subsistence Board Book, Region 2, Proposal 28. Office of Subsistence Management, FWS. Anchorage, AK.

FSB. 2004. Transcripts of Federal Subsistence Board proceedings, May 21, 2004. Office of Subsistence Management, FWS. Anchorage, AK.

FWS. 2011. Federal permit database, Office of Subsistence Management. Microcomputer database.

Gardner, C. 2002. Unit 12 Dall sheep management report. Pages 51–64 *In* C. Healy, editor. Dall sheep management report of survey and inventory activities 1 July 1998—30 June 2001. ADF&G. Proj. 6.0. Juneau, AK.

Hicks, J. 2004. Cheesh-na Tribal Council, Chistochina, AK. Personal Communication.

Mt. Sanford Tribal Consortium. 2004. *Whouy sze kuinalth, "Teaching our many Grandchildren," A Curriculum Guide.* Internet: http://www.ankn.uaf.edu/Curriculum/Whouy_Sze_Kuinalth/index.html

National Park Service. 1994. Final Report on Upper Tanana Region Customary and Traditional Use Eligibility. For the Communities of Dot Lake, Tanacross, Tetlin, Northway, and Tok. Reference prepared for the Federal Subsistence Board.

National Park Service. 1995. Customary and traditional use reference for the Copper River Basin Area. Reference prepared for the Federal Subsistence Board.

National Park Service. 2011. March 2011 Wildlife Report. Wrangell-St. Elias National Park and Preserve. Reference prepared for the Southcentral Regional Advisory Council.

SCRAC. 2004. Transcripts of the Southcentral Subsistence Regional Advisory Council proceedings, March 10, 2004. Office of Subsistence Management, FWS. Anchorage, AK.

Schmidt, J., M. MacCluskie, K. Rattenbury, J. Lawler. 2011. Using distance sampling and hierarchial models to estimate Dall sheep abundance in Gates of the Arctic National Park and Preserve. Powerpoint Presentation. George Wright Society Conference. March 15, 2011.

Schwanke, R. A. 2008. Unit 11 Dall sheep management report. Pages 16–31 in P. Harper, editor. Dall sheep management report of survey and inventory activities 1 July 2004 – 30 June 2007. Alaska Department of Fish and Game. Project. 6.0. Juneau, Alaska.

Scotton, B. D. 2002. Unit 11 Dall sheep management report. Pages 23–34 *In* C. Healy, editor. Dall sheep management report of survey and inventory activities 1 July 1998—30 June 2001. ADF&G. Proj. 6.0. Juneau, AK.

Weather Underground. www.wunderground.com. June 14, 2011.

ADF&G Comments on WP12-32
August 30, 2011; Page 1 of 2

Alaska Department of Fish and Game
Comments to Regional Advisory Council

Wildlife Proposal WP12-32: Change the season dates for the four federal subsistence elder sheep hunts in Units 11 and 12.

Introduction: This proposal requests moving the four federal subsistence "Elder Hunt" sheep hunting seasons in Unit 11 and that portion of Unit 12 within Wrangell-St. Elias National Park and Preserve from September 21 through October 20 to August 1 through 9. The proponent indicates the opportunity provided by the Federal Subsistence Board is insufficient because snow conditions impede elder access to the hunting ground in the late season. The proponent indicates an early August season will likely increase harvest success but the request shorter season will offset any increases in harvest.

Impact on Subsistence Users: If adopted, federal subsistence hunters participating in the Elder Hunt will be allowed to access the hunting ground prior to all other user groups during early August. If adopted, federal subsistence users who hunt sheep in the same areas might have fewer sheep to choose from depending upon participation in the Elder Hunt. If adopted, federal subsistence hunters participating in the Elder Hunt with the enhanced access (ATV, jet boat, horse, or airplane) could see harvest success rates significantly increase due to availability of undisturbed/unhunted sheep in early August. If adopted, federal subsistence hunters without enhanced access who plan participating in the Elder Hunt could be disadvantaged because sheep tend to inhabit higher elevations during the summer months and migrate to lower elevations as snow accumulates and as fall progresses.

Opportunity Provided by State: State sheep hunting regulations follow:

> Unit 11 - One ram with three-quarter curl horn or larger with a harvest ticket between August 10 and September 20. Nonresident hunters must be accompanied by a registered guide.
>
> Unit 12 Remainder – One ram with a full curl horn or larger with a harvest ticket between August 10 and September 20. Nonresident hunters must be accompanied by a registered guide.

Conservation Issues: Information from surveys and public observations indicate the sheep population in Unit 12 has declined since the late 1990s. However, since this is a full curl ram bag limit in Unit 12 there is no conservation issue in that unit.

Enforcement Concerns: Differences in state and federal regulations create enforcement problems in areas of mixed land ownership. If this proposal is adopted as written, both state and federal enforcement resources may be expended contacting Elder Hunt participants in response to reports "out of season hunting activities" from other hunters in the area.

Other Comments: One of the original intents impacting the development of the "Elder Hunt" was to provide an opportunity for less mobile elders to hunt more accessible sheep. Advancing the "Elder Hunt" season hunt by 52 days will result in requiring elders to

climb to significantly higher elevations to access sheep defeating one of the original intents of this hunt.

This proposal affects two types of Elder Hunts in both Units 11 and 12. The first type of Elder Hunt was established to accommodate a hunt with an elder and a youth with the goal of facilitating the transfer of knowledge between generations. The second type of Elder Hunt was established to allow federally qualified hunter age 60 or older the ability to hunt without competition from all user groups during time of year when the sheep might be more easily accessible at lower elevations.

The department opposes any sheep hunting before August 10 for several reasons. The warm weather during the first 10 days of August can be detrimental to proper care of harvested meat. The access trails into the park are normally still saturated from summer moisture and usage of the trails during the period may result in significant habitat damage.

If adopted as proposed, federally qualified elders participating in the Elder Hunt could unnecessarily impact other user groups by preempting harvest potential through harvesting all legal rams from an area or "scaring" off sheep herds with the preseason hunting activities disturbances.

Recommendation: Support with modification. The department supports liberalizing the Elder Hunt by advancing the season start date from to September 21 to August 10 and retaining the established season closure date of October 20 for the described federal public lands in Units 11 and 12. Adoption of this modification will provide federal subsistence users who qualify and choose to participate in the Elders Hunt an additional 41 days of opportunity to harvest a sheep during an unprecedented 70 day August 10 through October 20 summer/fall sheep hunting season. The department also recommends further defining the Unit 11 Elder Hunt harvest limit be to one sheep, lambs and ewes accompanied by lambs may not be taken.

WP12-33 Executive Summary	
General Description	Proposal WP12-33 seeks to shorten wolf hunting seasons in Units 11 and 12. *Submitted by the Defenders of Wildlife*
Proposed Regulation	**Unit 11—Wolf Hunting** *10 Wolves* ***Nov. 1–Mar. 31*** *~~Aug. 10–April 30~~* **Unit 12— Wolf Hunting** *10 Wolves* ***Nov. 1–Mar. 31*** *~~Aug. 10–April 30~~*
OSM Preliminary Conclusion	**Oppose**
Southcentral Regional Council Recommendation	
Eastern Interior Regional Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP12-33

ISSUES

Proposal WP12-33, submitted by the Defenders of Wildlife, seeks to shorten wolf hunting seasons in Units 11 and 12.

DISCUSSION

Proposal WP12-33 requests that wolf hunting be prohibited in Units 11 and 12 in the months of August, September, October, and April. The proponent wishes to apply this restriction in the part of Unit 12 that is outside of the State's predator control program [U.S. Fish and Wildlife Service (FWS) and National Park Service (NPS) lands]. The proponent notes that by late April, in Units 11 and 12, hides are rubbed and pregnant females are approaching full term. The proponent notes that pups are totally dependent on adults for food and protection at the start of the current wolf hunting seasons in Units 11 and 12 and that in August hides are not suitable for commercial sale or trophies.

Existing Federal Regulation

Unit 11—Wolf Hunting	
10 Wolves	*Aug. 10–April 30*
Unit 12—Wolf Hunting	
10 Wolves	*Aug. 10–April 30*

Proposed Federal Regulation

Unit 11—Wolf Hunting	
10 Wolves	***Nov. 1–Mar. 31*** ~~*Aug. 10–April 30*~~
Unit 12— Wolf Hunting	
10 Wolves	***Nov. 1–Mar. 31*** ~~*Aug. 10–April 30*~~

Existing State Regulation

Unit 11—Wolf Hunting	
5 Wolves	*Aug.10–April 30*
Unit 12—Wolf Hunting	
5 Wolves	*Aug.10–May 31*

Extent of Federal Public Lands

Federal public lands comprise approximately 81% of Unit 11 and consist of 97% National Park Service (NPS), 3% U.S. Forest Service (USFS) and <0.1% Bureau of Land Management (BLM) managed lands (see **Unit 11 Map)**. Federal public lands comprise approximately 59% of Unit 12 and consist of 82% National Park Service (NPS) and 18% U.S. Fish and Wildlife Service (FWS) managed lands (see **Unit 12 Map**).

Customary and Traditional Use Determinations

Rural residents of Units 6, 9, 10 (Unimak Island only), 11, 12, 13, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and Chickaloon have a positive customary and traditional use determination to harvest wolves in Units 11 and 12. In order to engage in subsistence in Wrangell St. Elias National Park, the National Park Service requires that subsistence users either live within the park's resident zone (36 CFR 13.430, 36 CFR 13.1902) or have a subsistence permit (36 CFR 13.440) issued by the park superintendent.

Regulatory History

The Federal subsistence wolf hunting seasons in Unit 11 and 12 have been from August 10 to April 30 since 1990. The harvest limit in both Units 11 and 12 was 10 wolves in regulatory year 1990/91. This was reduced to five wolves from regulatory years 1992/93 to 1998/99. In regulatory year 1999/2000, the Federal Subsistence Board changed the harvest limits in Units 11 and 12 to 10 wolves based on recommendations from the Eastern Interior Alaska Subsistence Regional Advisory Council and the Southcentral Alaska Subsistence Regional Advisory Council.

In 2004, Defenders of Wildlife submitted a proposal (WP05-02) requesting that wolf hunting seasons in Units 1, 3–4, 5A, 6–7, 9–13, 14C, 15–21, and 24–26 be closed until September 15. The Southcentral Alaska Subsistence Regional Advisory Council and Eastern Interior Alaska Subsistence Regional Advisory Council both opposed that proposal, as did six other Regional Advisory Councils. Consistent with these Regional Advisory Council recommendations, the Federal Subsistence Board rejected proposal WP05-02. In its comments concerning WP05-02, the Southcentral Alaska Subsistence Regional Advisory Council noted that there was no biological reason to reduce the wolf season (FSB 2005). At the Southcentral Alaska Subsistence Regional Advisory Council's March 2005 meeting, it was noted that the Denali Subsistence Resource Commission had reported that early season wolf pelts have low commercial value but are a resource for local subsistence users making crafts and clothing for personal use (SCRAC 2005). At its March 2005 meeting, Eastern Interior Alaska Subsistence Regional Advisory Council member Entsminger noted that, as a skin sewer, she has seen wolf hides from August and September and spring. She noted that in August and September wolf's hair tends to be shorter and is more useful for making hats and other things. She noted that while few wolves are taken in the fall, when they are harvested by subsistence users their hides are used (EIRAC 2005).

In 2009, Defenders of Wildlife submitted a proposal (WP10-38) requesting these same regulatory changes. The Southcentral Alaska Regional Advisory Council and the Eastern Interior Regional Advisory Council both opposed WP10-38. Both Councils noted that there were no conservation concerns for wolves in Units 11 and 12. WP10-38 was rejected by the Federal Subsistence Board.

Biological Background

Wolves (*Canis lupus*) have probably been part of Alaska fauna since the Pleistocene glaciation (Murie 1944). Wolves are currently found throughout most of Units 11 and 12. Prey species include caribou, moose, sheep, small mammals, snowshoe hare, and beaver. Murie (1944) noted that there are times of wolf scarcity and times of wolf abundance and suggested that food supply was probably an important factor affecting wolf abundance. Wolves first breed at age two to four and produce pups in dens during the spring (Mech et al. 1998). Litters average five or six pups. Wolves abandon the den after about eight weeks and live at sites above ground until early autumn when the entire pack roams a large territory for the rest of the fall and winter. Wolves live at low densities in a structured population of territorial packs (Mech and Boitani 2003). Meier et al. (2006) reported that 28% of the wolves leave their packs each year, and that most offspring eventually leave the pack. Dispersing wolves form new packs when they locate

dispersers of the opposite sex from another pack and a vacant area to establish a territory (Rothman and Mech 1979). Meier et al. (2006) reported that wolves sometimes disperse great distances. The longest documented dispersal of a Denali National Park and Preserve wolf was 435 miles.

The size of the home range is believed to be dependent on prey abundance, the activities of neighboring packs, and each pack's individual habits. Wolf pack territories overlap one another and change over time (Meier et al. 2006). As a pack makes its way around its territory, it may encounter and engage with other wolves within its territory at any time. A fight to the death can occur during such encounters. Predation by other wolves is probably the major cause of natural mortality among adult wolves. Meier et al. (2006) observed that at least 60% of the wolf deaths in Denali National Park and Preserve came from wolves being killed by other wolf packs. With high reproductive capacity, good survival of young, and high dispersal rates, wolf populations are able to quickly respond to changes in prey abundance.

Unit 11

In the early 1970s, McIlroy (1975) estimated that the wolf density in Unit 11 was 12/1000 mi^2. Kelleyhouse (2006) estimated that there were 10 to 20 wolf packs in regulatory years 1997/98 to 2004/2005. She estimated that there were 70–130 wolves in Unit 11 during that time-period and observed that wolf numbers were higher in the northern portions of the unit because of the higher density of caribou, moose and sheep. In 2008, the spring density of wolves in Unit 11 was approximately 6 wolves/1000 mi^2 (ADF&G 2010).

Unit 12

Hollis (2006) estimated that there were 240–255 wolves in Unit 12. Wolf density estimates for 2001 to 2004 ranged from 14 to 50/1000 mi^2 (Hollis 2006). Hollis (2006) estimated that, in regulatory year 2002/03, there were a total of 31 packs in Unit 12 with an average pack size of 7.0–7.4 wolves. The current fall wolf population estimate for Unit 12 is 179–192 wolves (18 to 19/1000 mi^2) (ADF&G 2010). The Unit 12 wolf population has benefited from high numbers of caribou since 1997 and from the snowshoe hare cycle highs in 1998–2001 and 2007–2009 (ADF&G 2010). The Chisana caribou herd has been a reliable food source for wolves in eastern Unit 12. Caribou from the Mentasta, Nelchina, and Macomb herds also have used portions of the unit and provide a food source for wolves (Hollis 2006)

Harvest History

Halpin (1987) and Stratton and Georgette (1984) provide some subsistence harvest information for communities in Units 11 and 12. Hunters occasionally take wolves in the fall and early spring when they are hunting other species. Once snow-cover and ice are adequate for snowmachine travel, trappers begin establishing and maintaining trap lines. Wolf harvest is spread throughout the winter. Wolf harvest declines in April as snow and ice conditions deteriorate with the spring melt. Fur prices and snow and ice conditions affect wolf trapping effort in any given year. The cost of snowmachines, gas, traps, and other equipment has increased over the last 20 to 25 years, yet the price of wolf pelts has declined. Hollis (2006) observed that in Unit 12, few trappers specifically target wolves, but noted that during years when marten and lynx pelt prices are low and wolf prices are adequate, more trappers concentrate on wolves. Harvest rates in remote areas are dependent on fur prices and weather conditions. Trapping pressure is high along the road system and around communities in Units 11 and 12 (Kelleyhouse 2006, Hollis 2006).

Wolves harvested either by trapping or hunting must be sealed by an ADF&G representative or appointed fur sealer. During the sealing process, information is obtained on the date and location of take, sex, color of pelt, estimated size of the wolf pack, method of take, and access used. Kelleyhouse (2006) observed

that in Unit 11, illegal and unreported wolf harvest was probably minimal. Wolves are difficult animals to bring down and it is not unreasonable to assume that some mortality is occurring as a result of wounding loss. Some wolves caught in traps that are not checked regularly are scavenged by other animals, and the hides are so damaged that they are discarded in the field with the harvest going unreported.

There have been a number of wolf control programs in Units 11 and 12 since the 1940s (Kelleyhouse 2006, Hollis 2006). The Alaska Board of Game authorized aerial wolf control in northern Unit 12 in 2004 (Hollis 2006).

Based on an analysis of information from North American wolf populations, Adams et al. (2008) concluded that wolf populations appear to be largely unaffected by human take of ≤29% annually. Given the limited effects of moderate levels of human take, they concluded that the risks of reducing wolf populations through regulated harvest are quite low.

Unit 11

From regulatory years 1999/2000 to 2009/10, the reported annual harvest of wolves in Unit 11 ranged from 15 to 35 wolves per year (**Table 1**). Most of the wolves were taken using traps or snares. Kelleyhouse (2006) observed that the reported harvest was relatively low when compared to the estimated Unit 11 wolf population size. She estimated that the annual harvest rate averaged about 14% for regulatory years 2002/03 to 2004/05.

Of a total of 234 wolves taken in Unit 11 during regulatory years 1999/2000 to 2009/010, 28 were shot during the months of August, September, October and April (**Table 1**).

Unit 12

From regulatory years 1999/2000 to 2009/10, the reported annual harvest of wolves in Unit 12 ranged from 21 to 58 wolves per year (**Table 2**). Most of the wolves were taken using traps or snares. The harvest was relatively low when compared to the estimated Unit 12 wolf population size.

Of a total of 436 wolves taken in Unit 12 during regulatory years 1999/2000 to 2009/10, 46 were shot during the months of August, September, October and April (**Table 2**).

Effects of the Proposal

If Proposal WP12-33 is adopted, the Federal wolf hunting seasons in Units 11 and 12 will be shortened. The proposals seek to close the Federal wolf hunting seasons in these units from August 10–October 31 and April 1–30, thereby shortening the existing season by 113 days. Between regulatory years 1999/2000 and 2009/10, in Unit 11 and Unit 12 combined, 11% of the reported wolf harvest occurred in the months of August, September, October and April (**Tables 1 and 2**; ADF&G 2011). Proposal WP12-33 will eliminate the opportunity for Federally qualified subsistence users to harvest wolves under Federal regulations during the fall and spring when they are hunting other species. This proposal will make the Federal subsistence wolf hunting season in Unit 11 shorter than the State season. The Federal hunting season for wolves in Unit 12 is already shorter than the State season; this proposal seeks to make it even shorter.

OSM PRELIMINARY CONCLUSION

Oppose Proposal WP12-33.

Table 1. Reported wolf harvest and method of take for Unit 11, regulatory years 1999/00 to 2009/10 (ADF&G 2011).

Regulatory year	Reported total harvest	Shot Aug.–Oct. & April harvest	Method of take for total harvest from Unit 11				
			Trap/ snare	(%)	Shot	%	Unknown
1999/2000	23	2	21	91	2	9	0
2000/01	35	4	31	89	4	11	0
2001/02	23	1	21	91	2	9	0
2002/03	19	1	18	95	1	5	0
2003/04	15	2	11	73	3	20	1
2004/05	15	3	12	80	3	20	0
2005/06	26	2	22	85	4	15	0
2006/07	15	1	14	93	1	7	0
2007/08	23	3	19	83	4	17	0
2008/09	18	1	17	94	1	6	0
2009/10	22	8	12	55	10	45	0

Table 2. Reported wolf harvest and method of take for Unit 12, regulatory years 1999/00 to 2009/10 (ADF&G 2011).

Regulatory year	Reported total harvest	Shot Aug.–Oct. & April harvest	Method of take for total harvest from Unit 12				
			Trap/ snare	(%)	Shot	%	Unknown
1999/2000	54	11	40	74	13	24	1
2000/01	58	2	51	88	7	12	0
2001/02	39	4	32	82	7	18	0
2002/03	53	2	49	92	4	8	0
2003/04	25	2	23	92	2	8	0
2004/05	29	1	27	93	2	7	0
2005/06	39	8	22	56	15	38	2
2006/07	30	2	24	80	6	20	0
2007/08	49	5	40	82	9	18	0
2008/09	39	3	29	74	7	18	3
2009/10	21	6	9	43	12	57	0

Justification

Two years ago the Defenders of Wildlife requested these same regulatory changes. The Southcentral Alaska Regional Advisory Council and the Eastern Interior Regional Advisory Council both opposed that proposal and the Federal Subsistence Board rejected it.

The wolf populations in Units 11 and 12 are thought to be healthy. Wolves are prolific reproducers and survival of young is generally high. Young wolves disperse from packs at high rates as yearlings and 2-year-olds; these individuals are abundant and available to be harvested. The wolf population in these units is thought to be regulated more by natural factors than by the harvest by hunters and trappers.

Wolves are an important subsistence resource in Units 11 and 12. The harvest of wolves and the use, barter, and sale of pelts is a long standing component of the subsistence economy. While only a small part of the wolf harvest occurs in the months of August, September, October and April, the opportunity for hunters to take wolves in these months is important to Federally qualified subsistence users.

Even if this proposal is adopted by the Federal Subsistence Board, hunters will still be able to take wolves under State regulations on FWS, BLM, USFS and Wrangell-St. Elias Preserve lands in these two units. Therefore, adoption of this proposal by the Federal Subsistence Board will not have the effect sought by the proponent.

LITERATURE CITED

Adams, L.G., R.O. Stephenson, B.W. Dale, R. T. Ahgook, and D.J. Demma. 2008. Population dynamics and Harvest characteristics of wolves in the central Brooks Range, Alaska. Wildlife Monographs 170.

ADF&G. 2010. January 18 draft written comments to the Interagency Staff Committee. 4 pages.

ADF&G. 2011. Harvest ticket database. Microcomputer database, query April 21, 2011.

EIRAC. 2005. Transcripts of the Eastern Interior Alaska Regional Advisory Council proceedings, 2 March 2005. Office of Subsistence Management, FWS, Anchorage, AK.

FSB. 2005. Regional Council recommendations WP05-02, page 249 in Federal Subsistence Board Meeting Materials, May 3&4, 2005. Office of Subsistence Management, FWS, Anchorage, AK. 322 pages.

Haplin, L. 1987. Living off the land: contemporary subsistence in Tetlin, Alaska. ADF&G Subsistence Division, Technical Paper Number 149. Juneau, AK. 124 pages.

Hollis, A.L. 2006. Unit 12 wolf management report. Pages 76–89 in P. Harper, ed. Wolf management report of survey and inventory activities, 1 July 2002–30 June 2005. ADF&G. Project 14.0, Juneau, AK.

Kelleyhouse, R.A. 2006. Unit 11 wolf management report. Pages 69–73 in P. Harper, ed. Wolf management report of survey and inventory activities, 1 July 2002–30 June 2005. ADF&G. Project 14.0, Juneau, AK.

McIlroy, C. 1975. Unit 11 wolf survey-inventory progress report. Pages 106–109 in D.E. McKnight, ed. Annual report of survey-inventory activities. Part III. Caribou, marine mammals, mountain goat, wolf, and black bear. Vol. V. ADF&G. Fed. Aid in Wildl. Rest. Prog. Report, Project W-17-6. Jobs 3, 8, 12, 14, 17 and 22. Juneau, AK.

Mech. D.L., L.G. Adams, T.J. Meier, J.W. Burch and B.W. Dale. 1998. The wolves of Denali. University of Minnesota Press. Minneapolis, MN. 227 pages.

Mech, L.D. and L. Boitani. 2003. Wolf social ecology. Pages 1–34 in L.D. Mech and L. Boitani. eds. Wolves: Behavior, ecology, and conservation. University of Chicago Press.

Meier, T., J. Burch, and L.G. Adams. 2006. Tracking the movements of Denali's wolves. Alaska Park Science. 5(1):30–35.

Murie, A. 1944. The wolves of Mount McKinley. U.S. Government Printing Office. Washington D.C. 238 pages.

Rothman, R.J. and L.D. Mech. 1979. Scent-marking in lone wolves and newly formed pairs. Anim. Behav. 27:750–760.

SCRAC. 2005. Transcripts of the Southcentral Alaska Regional Advisory Council proceedings, 15–17 March 2005. Office of Subsistence Management, FWS, Anchorage, AK.

Stratton, L. and S. Georgette. 1984. Use of fish and game by communities in the Copper River Basin, Alaska: A report on the 1983 household survey. ADF&G Subsistence Division, Technical Paper Number 107. Juneau, AK. 212 pages.

WP12-34/35/36 Executive Summary	
General Description	Proposal WP12-34, submitted by the Defenders of Wildlife, seeks to shorten wolf seasons and lower the harvest limit for wolves in Unit 13D. Proposals WP12-35 and -36 submitted by the Defenders of Wildlife, seek to close the Unit 14C wolf hunting and trapping seasons.
Proposed Regulation	**WP12-34** **Unit 13D—Wolf Hunting** ~~*10*~~*5 Wolves* — ***Nov. 1–Mar. 31*** ~~*Aug. 10–April 30*~~ **WP12-35** **Unit 14C—Wolf Hunting** ~~***5 Wolves***~~ — ***No open season*** ~~*Aug. 10–April 30*~~ **WP12-36** **Unit 14C—Wolf Trapping** ~~*No limit*~~ — ***No open season*** ~~Nov. 10–Feb. 28~~
OSM Preliminary Conclusion	**Oppose**
Southcentral Regional Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP12-34, -35 AND -36

ISSUES

Proposal WP12-34, submitted by the Defenders of Wildlife, seeks to shorten wolf seasons and lower the harvest limit for wolves in Unit 13D. Proposals WP12-35 and -36 submitted by the Defenders of Wildlife, seek to close the Unit 14C wolf hunting and trapping seasons.

DISCUSSION

Proposal WP12-34 requests that wolf hunting season in Unit 13D be changed from August 10–April 30 to November 1–March 31, and that the harvest limit be reduced from 10 wolves to five. The proponent notes that by late April, in Units 13D, hides are rubbed and pregnant females are approaching full term. The proponent notes that pups are only half grown at the start of the current wolf hunting seasons in Unit 13D and that in August, hides are not suitable for commercial sale or trophies.

Proposals WP12-35 and -36 request that wolf hunting and trapping seasons be closed in Unit 14C to provide for more wildlife viewing opportunities.

Existing Federal Regulation

Unit 13D—Wolf Hunting	
10 Wolves	*Aug. 10–April 30*
Unit 14C—Wolf Hunting	
5 Wolves	*Aug. 10–April 30*
Unit 14C—Wolf Trapping	
No limit	*Nov. 10–Feb. 28*

Proposed Federal Regulation

Proposal WP12-34

Unit 13D—Wolf Hunting	
~~*10*~~***5*** *Wolves*	***Nov. 1–Mar. 31***
	~~*Aug. 10–April 30*~~

Proposal WP12-35

Unit 14C—Wolf Hunting	
~~***5 Wolves***~~	***No open season***
	~~*Aug. 10–April 30*~~

Proposal WP12-36

Unit 14C—Wolf Trapping

~~*No limit*~~	***No open season*** ~~Nov. 10–Feb. 28~~

Existing State Regulation

Unit 13D—Hunting

10 Wolves per day	*Aug. 10–April 30*

Unit 14C remainder (outside special management areas)—Wolf Hunting

5 Wolves	*Aug. 10–May 31*

Unit 14C (Glacier Creek, Twentymile River, drainages of the Knik River outside Chugach State Park)—Wolf Trapping

20 Wolves	*Dec. 1–April 15*

Extent of Federal Public Lands

Federal public lands comprise approximately 8% of Unit 13D and consist of 86% U.S. Forest Service (USFS) and 14% Bureau of Land Management (BLM) managed lands (see **Unit 13 Map**). Federal public lands comprise approximately 17% of Unit 14C and consist of 75% USFS, 25% BLM and <0.1% U.S. Fish and Wildlife Service (FWS) managed lands (see Unit 14 Map).

Customary and Traditional Use Determinations

Rural residents of Units 6, 9, 10 (Unimak Island only), 11, 12, 13, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and Chickaloon have a positive customary and traditional use determination to harvest wolves in Unit 13D. All rural residents have a positive customary and traditional use determination to harvest wolves in Unit 14C.

Regulatory History

The Federal subsistence wolf trapping season in Unit 13D extended from November 1–March 31 in regulatory years 1990/91 to 1993/94. Action taken on a proposal from ADF&G (Proposal 2) and supported by the Southcentral Alaska Subsistence Regional Advisory Council (Council) changed the season to November 10–March 31 beginning in regulatory year 1994/95. Action taken on a proposal from the Office of Subsistence Management (Proposal 2), and supported by the Council, changed the season to October 15–April 30 in regulatory year 2000/2001. There has been no harvest limit under wolf trapping regulations in Unit 13D since 1990.

The Federal subsistence wolf hunting season in Unit 13D has extended from August 10–April 30 since 1990. There was no harvest limit for wolf hunters in Unit 13D in regulatory years 1990/91 and 1991/92. The harvest limit was reduced to ten wolves in regulatory year 1992/93. Action taken on a proposal from ADF&G (Proposal 2) and supported by the Council reduced the Unit 13D harvest limit to five wolves in regulatory year 1994/95. Action taken on a proposal from the Eastern Interior Alaska Subsistence Regional Advisory Council (Proposal 24) and supported by the Southcentral Alaska Subsistence Regional

Advisory Council increased the harvest limit for hunters in Unit 13D to ten wolves in regulatory year 2000/01.

The Federal subsistence, Unit 14C, wolf hunting season has been August 10–April 31 since 1990. The Unit 14C wolf hunting harvest limit was one wolf for regulatory years 1990/91 to 1993/94. Action taken on a proposal from ADF&G (Proposal 2) and supported by the Council changed this harvest limit to 5 wolves in regulatory year 1994/95.

Trappers may shoot a free ranging wolf on USFS, BLM and FWS lands in these units during trapping season. The Federal subsistence wolf trapping season in Unit 14C is November 10–February 28. Hunters and trappers may harvest wolves under State regulations on USFS, BLM, and FWS lands in these units.

The proponent of WP12-35 and -36 is seeking to provide more wildlife viewing opportunities in Unit 14C. The Federal Subsistence Board restricted subsistence to provide for wildlife viewing once before. In 1996, the U.S. Department of Agriculture, U.S. Forest Service submitted a proposal to close a portion of Anan Creek in Unit 1B to brown bear hunting and to modify a closure to black bear hunting to provide for wildlife viewing. The change was requested to align with State regulations and to address potential safety hazards of bear hunting near a viewing area. The Southeast Alaska Subsistence Regional Advisory Council supported that proposal and it was adopted by the Board in April 1997.

In 2004, Defenders of Wildlife submitted a proposal (WP05-02) requesting that wolf hunting seasons in Units 1, 3–4, 5A, 6–7, 9–13, 14C, 15–21, and 24–26 be closed until September 15. The Southcentral Alaska Subsistence Regional Advisory Council opposed that proposal, as did seven other Regional Advisory Councils. Consistent with these Regional Advisory Council recommendations, the Federal Subsistence Board rejected proposal WP05-02. In its comments concerning WP05-02, the Council noted that there was no biological reason to reduce the wolf season (FSB 2005). At the Council's March 2005 meeting in Anchorage, it was noted that the Denali Subsistence Resource Commission had reported that early season wolf pelts have low commercial value but are a resource for local subsistence users making crafts and clothing for personal use (SCRAC 2005).

In 2009, Defenders of Wildlife and the Alaska Wildlife Alliance submitted Proposals WP10-36 and -37 to shorten wolf seasons and lower harvest limits for wolves in Unit 13D. That year the Alaska Wildlife Alliance also submitted Proposal WP10-41 to close the Unit 14C wolf hunting season. The Southcentral Regional Advisory Council opposed Proposals WP10-36, -37 and -41 noting that there were no wolf conservation concerns in these units and that wolf populations are healthy. The Federal Subsistence Board rejected these proposals (WP10-36, -37 and -41).

Biological Background

Wolves (*Canis lupus)* have probably been part of Alaska fauna since the Pleistocene glaciation (Murie 1944). Wolves are found throughout most of Units 13D and 14C. Prey species include caribou, moose, sheep, small mammals, snowshoe hare, beaver, and salmon. Murie (1944) noted that there are times of wolf scarcity and times of wolf abundance and suggested that food supply was probably an important factor affecting wolf abundance. Wolves first breed at age two to four and produce pups in dens during the spring (Mech et al. 1998). Litters average five or six pups. Wolves abandon the den after about eight weeks and live at sites above ground until early autumn when the entire pack roams a large territory for the rest of the fall and winter. Wolves live at low densities in a structured population of territorial packs (Mech and Boitani 2003). Meier et al. (2006) reported that 28% of the wolves leave their packs each year, and that most offspring eventually leave the pack. Dispersing wolves form new packs and territories when they locate dispersers of the opposite sex from another pack and an unoccupied territory (Rothman and

Mech 1979). Meier et al. (2006) reported that wolves sometimes disperse great distances. Kelleyhouse (2006) noted that radio-collared wolves from the Kenai Peninsula, Denali National Park, and Units 20 and 12 have been observed or harvested in Unit 13.

The home range size is believed to be dependent on prey abundance, the activities of neighboring packs, and each pack's individual habits. Wolf pack territories overlap one another and change over time (Meier et al. 2006). As a pack makes its way around its territory, it may encounter and engage with other wolves within its territory at any time. A fight to the death can occur during such encounters. Predation by other wolves is probably the major cause of natural mortality among adult wolves. Meier et al. (2006) observed that at least 60% of the wolf deaths in Denali National Park and Preserve came from wolves being killed by other wolf packs. With high reproductive capacity, good survival of young, and high dispersal rates, wolf populations are able to quickly respond to changes in prey abundance.

Unit 13D

Kelleyhouse (2006) presented the wolf population data for Unit 13 as a whole, and did not break out the information for Unit 13D. While information is limited, she estimated that in Unit 13 there were 220–520 wolves in 50–70 packs in regulatory years 1997/98 to 2004/05. This represented a density of approximately 14–32 wolves/1000 mi.^{2}. Wolf territory, size and productivity are thought to be primarily a function of moose density (Kelleyhouse 2006).

Unit 14C

ADF&G (2010) reported that based on an aerial survey in 1995 and anecdotal reports, Unit 14C has at least 25–30 wolves in 4–5 packs. One of these packs uses the Twentymile River drainage in the southeastern corner of the subunit, which is in the Chugach National Forest. ADF&G noted that a second pack from the Kenai Peninsula may occasionally include the Twentymile River drainage. Wolf hunting and trapping is prohibited in adjacent Chugach State Park and on the local military reservations, which provide refugium for one of the subunit's packs and partial refugium for at least two other packs. Peltier (2006) noted that ADF&G's objective was to maintain a minimum population of 20 wolves in Unit 14C.

Harvest History

Stratton and Georgette (1984) provide some subsistence harvest information for communities in the Copper River Basin. Hunters occasionally take wolves opportunistically in the fall and early spring when they are hunting other species. Fur prices and snow and ice conditions affect wolf trapping effort in any given year. Once snow-cover and ice are adequate for snowmachine travel, trappers began establishing and maintaining trap lines. Wolf harvest by trappers is normally spread throughout the winter and declines as snow and ice conditions deteriorate. The cost of snowmachines, gas, traps, and other equipment has increased over the last 20 to 25 years, yet the price of wolf pelts has declined.

Wolves harvested either by trapping or hunting in Alaska must be sealed by an ADF&G representative or appointed fur sealer. During the sealing process, information is obtained on the date and location of take, sex, color of pelt, estimated size of the wolf pack, method of take, and access used. Wolves are difficult animals to bring down and it is not unreasonable to assume that some mortality is occurring as a result of wounding loss. Some wolves caught in traps that are not checked regularly are scavenged by other animals, and the hides are so damaged that they are discarded in the field with the harvest going unreported.

Based on an analysis of information from North American wolf populations, Adams et al. (2008) concluded that wolf populations appear to be largely unaffected by human take of ≤29% annually. Given the limited effects of moderate levels of human take, they concluded that the risks of reducing wolf populations through regulated harvest are low.

Unit 13D

From regulatory years 1999/00 to 2009/10, the reported annual harvest of wolves in Unit 13D ranged from 7 to 22 wolves per year (**Table 1**). Of the 153 wolves harvested during these years, 90 were taken using traps or snares, and 63 were shot. Forty one wolves (26%) were taken during the months of August, September, October and April (**Table 1)**. Since 2001, the estimated annual harvest rate of wolves in Unit 13D has been 9–38% (average 23%) (ADF&G 2010). Wolf numbers in Unit 13D are stable (ADF&G 2010).

Table 1. Reported wolf harvest and method of take for Unit 13D, regulatory years 1999/00 to 2009/10 (ADF&G 2011).

Regulatory year	Reported total harvest	Aug.–Oct. & April harvest	Method of take for total harvest from Unit 13D				
			Trap/ snare	(%)	Shot	%	Unknown
1999/2000	10	3	4	40	6	60	0
2000/01	8	2	6	75	2	25	0
2001/02	19	2	13	69	6	31	0
2002/03	13	3	7	54	6	46	0
2003/04	8	3	4	50	4	50	0
2004/05	8	4	3	43	5	57	0
2005/06	22	9	17	77	5	23	0
2006/07	19	4	10	53	9	47	0
2007/08	16	4	11	69	5	31	0
2008/09	17	6	13	76	4	24	0
2009/10	13	1	2	15	11	85	0

Unit 14C

From regulatory years 1999/00 to 2009/10, the reported annual harvest of wolves in Unit 14C ranged from 0 to 4 wolves per year (**Table 2**). Most of these wolves were shot. Peltier (2006) estimated that Unit 14 wolf harvest rates were approximately 22–35% in regulatory years 2002/03 to 2004/05. He observed that weather and trapping conditions can greatly affect the number that are taken with traps and snares, whereas the number shot is more dependent on travel conditions. In Unit 14, hunters take a significant portion of the annual wolf harvest incidental to hunting for other species.

Table 2. Reported wolf harvest and method of take for Unit 14C, regulatory years 1999/00 to 2009/10 (ADF&G 2011).

Regulatory year	Reported total harvest	Method of take for total harvest from Unit 14C				
		Trap/snare	%	Shot	%	Unknown
1999/2000	1	0	0	0	0	1
2000/01	1	0	0	1	100	0
2001/02	0	0	0	0	0	0
2002/03	0	0	0	0	0	0
2003/04	0	0	0	0	0	0
2004/05	2	1	100	0	0	1
2005/06	0	0	0	0	0	0
2006/07	1	0	0	1	100	0
2007/08	4	0	0	4	100	0
2008/09	0	0	0	0	0	0
2009/10	1	0	0	0	0	1

Effects of the Proposal

If adopted, these proposals will decrease the opportunity to harvest wolves under Federal subsistence regulations in Units 13D and 14C.

If proposal WP10-34 is adopted the Federal wolf hunting seasons in Unit 13D will be shortened and harvest limits will be reduced. Proposal WP10-34 will eliminate the opportunity for subsistence users to harvest wolves under Federal regulations during the fall and early spring when they are hunting other species. Between regulatory years 1999/2000 and 2009/10, 26% of the reported Unit 13D wolf harvest occurred in August, September, October and April (**Table 1)**. Proposal WP10-34 will make the Federal subsistence wolf hunting season shorter than the State season. WP10-34 will also make the Federal subsistence wolf hunting harvest limit lower than the State regulations.

If Proposal WP10-35 is adopted, the Federal wolf hunting season in Unit 14C will be closed. If Proposal WP10-36 is adopted, it will close Federal wolf trapping in Unit 14C. The proposed closures of wolf hunting and trapping in Unit 14C will make the Federal subsistence regulations more restrictive than the State regulations.

OSM PRELIMINARY CONCLUSION

Oppose Proposals WP12-34, -35 and -36.

Justification

The wolf populations in Subunits 13D and 14C are thought to be healthy. Wolves are prolific and survival of young is generally high. Young wolves disperse from packs at high rates as yearlings and 2-year-olds;

these individuals are abundant and available to be harvested. The wolf populations in these units are thought to be regulated more by natural factors than by hunters and trappers.

Wolves are an important subsistence resource in Units 13D and 14C. The harvest of wolves and the use, barter, and sale of wolf pelts is a long standing component of the subsistence economy.

Even if these proposals are adopted by the Federal Subsistence Board, hunters will still be able to take wolves under State regulations on USFS, BLM, and FWS lands in these two units. Therefore, adoption of these proposals by the Federal Subsistence Board will not have the effect sought by the proponent.

Of these three proposals, two (WP12-34 and -35) ask for regulatory changes that are the same as those requested two years ago. The Southcentral Alaska Regional Advisory Council and the Eastern Interior Regional Advisory Council both opposed the regulatory changes requested in WP12-34 and -35 and the Federal Subsistence Board rejected them.

LITERATURE CITED

Adams, L.G., R.O. Stephenson, B.W. Dale, R. T. Ahgook, and D.J. Demma. 2008. Population dynamics and Harvest characteristics of wolves in the central Brooks Range, Alaska. Wildlife Monographs 170.

ADF&G. 2010. January 18 draft written comments to the Interagency Staff Committee. 2 pages.

ADF&G. 2011. Harvest ticket database. Microcomputer database, query April 21, 2011.

FSB. 2005. Regional Council recommendations WP05-02, page 249 *in* Federal Subsistence Board Meeting Materials, May 3&4, 2005. Office of Subsistence Management, FWS, Anchorage, AK. 322 pages.

Peltier, T. 2006. Unit 14 wolf management report. Pages 100–108 *in* P. Harper, ed. Wolf management report of survey and inventory activities, 1 July 2002–30 June 2005. ADF&G. Project 14.0, Juneau, AK.

Kelleyhouse, R.A. 2006. Unit 13 wolf management report. Pages 90–99 *in* P. Harper, ed. Wolf management report of survey and inventory activities, 1 July 2002–30 June 2005. ADF&G. Project 14.0, Juneau, AK.

Mech. D.L., L.G. Adams, T.J. Meier, J.W. Burch and B.W. Dale. 1998. The wolves of Denali. University of Minnesota Press. Minneapolis, MN. 227 pages.

Mech, L.D. and L. Boitani. 2003. Wolf social ecology. Pages 1–34 *in* L.D. Mech and L. Boitani. eds. Wolves: Behavior, ecology, and conservation. University of Chicago Press.

Meier, T., J. Burch, and L.G. Adams. 2006. Tracking the movements of Denali's wolves. Alaska Park Science. 5(1):30–35.

Murie, A. 1944. The wolves of Mount McKinley. U.S. Government Printing Office. Washington D.C. 238 pages.

Rothman, R.J. and L.D. Mech. 1979. Scent-marking in lone wolves and newly formed pairs. Anim. Behav. 27:750–760.

SCRAC. 2005. Transcripts of the Southcentral Alaska Subsistence Regional Advisory Council proceedings, March 15–17, 2005. Office of Subsistence Management, FWS, Anchorage, AK.

Stratton, L. and S. Georgette. 1984. Use of fish and game by communities in the Copper River Basin, Alaska: A report on the 1983 household survey. ADF&G Subsistence Division, Technical Paper Number 107. Juneau, AK. 212 pages.

WP10-104 and WP12-65/66 Executive Summary	
General Description	Deferred Proposal WP10-104 requests that a joint Federal-State draw permit hunt for the Chisana Caribou Herd (CCH) be established in Unit 12 beginning in the fall of 2011. The harvest quota would be in accordance with the recommendations of the Draft Chisana Caribou Herd Management Plan (Draft Management Plan), the harvest limit would be one bull, and the hunting season would be September 1 through September 30. A portion of the permits would be issued to Federally qualified subsistence hunters for a Federal hunt and the remainder of the permits would be issued to Alaska residents and nonresidents for a State hunt. *Submitted by Leif L. Wilson on behalf of the Upper Tanana/40 Mile Advisory Committee* Proposal WP12-65 requests that a Federal registration hunt for the CCH be established beginning in the fall of 2012. The harvest quota would be in accordance with the recommendations of the Draft Management Plan the harvest limit would be one bull and the hunting season would be August 10 through September 30. *Submitted by Terry Brigner on behalf of the Upper Tanana/40 Mile Advisory Committee* Proposal WP12-66 requests that a Federal registration hunt for the CCH be established beginning in the fall of 2012. The harvest quota would be in accordance with the recommendations of the Draft Management Plan. The hunt would be restricted to Federal public lands in Unit 12 that lie east of the Nabesna River and the Nabesna Glacier. The harvest limit would be one bull and the hunting season would be Sept. 1 through Sept. 30. Additionally, the proponent asks that an Alaska National Interest Land Claims Act (ANILCA) Section 804 analysis be completed. *Submitted by the Cheesh 'na Tribal Council*
Proposed Regulation	Proposal WP10-104 **Unit 12—Caribou** *Unit 12, that portion of the Nabesna River drainage within the Wrangell-St. Elias National Park and Preserve and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border—* ~~*The taking of caribou is prohibited on Federal public lands*~~*.* ***1 bull by joint State-Federal drawing permit only***. — ~~*No Federal open season*~~ ***Sept. 1–Sept. 30***

continued on next page

WP10-104 and WP12-65/66 Executive Summary *(continued)*	
Proposed Regulation (Continued)	Proposal WP12-65 **Unit 12–Caribou** *Unit 12, that portion of the Nabesna River drainage within the Wrangell-St. Elias National Park and Preserve and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border— ~~The taking of caribou is pro(hibited on Federal public lands~~. **1 bull by Federal registration permit only**.* — *~~No Federal open season~~* ***Aug. 10–Sept. 30*** Proposal WP12-66 **Unit 12–Caribou** *Unit 12, that portion ~~of the Nabesna River drainage~~ within the Wrangell-St. Elias National Park **that lies west of the Nabesna River and the Nabesna Glacier**~~, and Preserve and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border~~* — *No Federal open season* *Unit 12, that portion **east** of the Nabesna River and **the Nabesna Glacier,** ~~drainage within the Wrangell-St. Elias National Park and Preserve~~ and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border— **1 bull by Federal registration permit only**.* — ***Sept. 1 –Sept. 30***
OSM Preliminary Conclusion	**Take No Action** Proposals WP 10-104 and WP12-65. **Support** Proposal WP12-66 **with modification** to list the communities allowed to harvest caribou in Unit 12, that portion east of the Nabesna River and the Nabesna Glacier, and lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border: Northway, Mentasta, Tetlin, Tok, and Chisana, and, if Proposal WP12-68 is adopted by the Federal Subsistence Board, Chistochina.

continued on next page

WP10-104 and WP12-65/66 Executive Summary *(continued)*		
OSM Preliminary Conclusion (Continued)	The modified regulation would read:	
	Unit 12—Caribou	
	Unit 12, that portion ~~of the Nabesna River drainage~~ within the Wrangell-St. Elias National Park ***that lies west of the Nabesna River and the Nabesna Glacier****~~, and Preserve and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border~~*	*No Federal open season*
	Unit 12, that portion ***east*** *of the Nabesna River and* ***the Nabesna Glacier,*** *~~drainage within the Wrangell-St. Elias National Park and Preserve~~ and ~~all Federal Public lands~~ south of the Winter Trail running southeast from Pickerel Lake to the Canadian border—* ***1 bull by Federal registration permit only****.*	***Sept. 1 –Sept. 30***
	Federal public lands are closed to the harvest of caribou except by residents of Chisana, Chistochina, Mentasta, Northway, Tetlin, and Tok.	
Southeast Regional Council Recommendation		
Interagency Staff Committee Comments		
ADF&G Comments	See comments following the analysis.	
Written Public Comments	**None**	

DRAFT STAFF ANALYSIS
WP10-104, WP12-65, WP12-66

ISSUES

Deferred Proposal WP10-104, submitted by Leif L. Wilson on behalf of the Upper Tanana/40 Mile Advisory Committee, requests that a joint Federal-State draw permit hunt for the Chisana Caribou Herd (CCH) be established in Unit 12 beginning in the fall of 2011. The harvest quota would be in accordance with the recommendations of the Draft Chisana Caribou Herd Management Plan (Draft Management Plan), the harvest limit would be one bull, and the hunting season would be September 1 through September 30. A portion of the permits would be issued to Federally qualified subsistence hunters for a Federal hunt and the remainder of the permits would be issued to Alaska residents and nonresidents for a State hunt.

Proposal WP12-65, submitted by Terry Brigner on behalf of the Upper Tanana/40 Mile Advisory Committee, requests that a Federal registration hunt for the CCH be established beginning in the fall of 2012. The harvest quota would be in accordance with the recommendations of the Draft Management Plan the harvest limit would be one bull and the hunting season would be August 10 through September 30.

Proposal WP12-66, submitted by the Cheesh ‘na Tribal Council, requests that a Federal registration hunt for the CCH be established beginning in the fall of 2012. The harvest quota would be in accordance with the recommendations of the Draft Management Plan. The hunt would be restricted to Federal public lands in Unit 12 that lie east of the Nabesna River and the Nabesna Glacier. The harvest limit would be one bull and the hunting season would be Sept. 1 through Sept. 30. Additionally, the proponent asks that an Alaska National Interest Land Claims Act (ANILCA) Section 804 analysis be completed.

DISCUSSION

All three proposals request the establishment of a hunt in an area and on a population that is currently closed to all users (hunting opportunity of the CCH was closed in 1994). The Alaska range of the CCH is primarily within the Wrangell-St. Elias National Park and Preserve, in a remote, mountainous location that is difficult to access. The Draft Management Plan recommends a harvestable surplus of 2% of the herd split between Alaska and Yukon Canada. Based on the fall 2010 census, the Alaska portion of the quota (1%) is approximately seven animals, considerably less than the number of Federally qualified users, which includes the residents of Unit 12, Dot Lake, Healy Lake and Mentasta Lake. Because of the small harvestable surplus, and the large number of Federally qualified users, it may be that if a harvest opportunity is provided, Federal public lands would remain closed to all but Federally qualified users.

Proposal WP10-104: This proposal was deferred until the 2012 regulatory cycle by the Federal Subsistence Board (Board) during its spring 2010 meeting. The Board decided that it was premature to adopt hunting regulations for the CCH until the Draft Management Plan was finalized and supported by the management agencies involved with the CCH. An approved management plan would establish the biological thresholds (e.g., herd size, sex ratio, cow:calf ratio) needed for evaluating herd stability before a harvest quota could be identified. In addition, a CCH census was scheduled to be completed in October 2010. The Board noted that the census information would allow management biologists to determine if the CCH could sustain a harvest.

Proposal WP12-65: The proponent recommends allowing Federal subsistence users to hunt the CCH for two years. After a two-year test period, they suggest establishing an upper limit on Federal subsistence harvest which they refer to as "Federal subsistence need." This harvest limit would be equivalent to the greater annual harvest of Chisana caribou in the two seasons, the fall of 2012 and the fall of 2013. If the "Federal subsistence need" falls below the recommended harvest allocation as defined in the Draft Management Plan, the remaining animals would be made available for harvest in a State hunt administered by the ADF&G. While the proposal noted a "Federal subsistence need," the Federal Subsistence Board provides for a subsistence priority on Federal public lands (36 CFR 242.10 (d)(6) and 50 CFR 100.10(d)(6)); they do not establish any quantitative measurement of the subsistence resources needed for subsistence harvest. The level of participation in a Federal subsistence hunt is unknown, but the proponent believes that the number of caribou available is likely greater than what is harvested by Federal subsistence users.

Proposal WP12-66: The proponent suggests that the number of permits issued should be equal to 1.5 times the number of animals available for harvest and successful harvests be reported within 3 days of the harvest. The proponent requests that a Section 804 analysis be developed to identify those most dependent on the resource and suggests that a working group could be formed to address allocation of harvest permits. Furthermore, the proponent requests that the land west of the Nabesna River remain closed to harvest in order to avoid incidental harvest of the Mentasta Caribou Herd (MCH). The area proposed in Proposal WP12-66 to be opened—Unit 12, that portion east of the Nabesna River and the Nabesna Glacier—covers the core range. The MCH has experienced a dramatic decline from 2,304 caribou in 1990 to 600 in 1997 (Jenkins 2005). The 2010 census of the MCH herd resulted in a population estimate of 336 animals (Putera 2011). Currently, all harvest of the MCH is closed under both Federal and State regulations.

Existing Federal Regulation

Unit 12—Caribou

Unit 12, that portion of the Nabesna River drainage within the Wrangell-St. Elias National Park and Preserve and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border—The taking of caribou is prohibited on Federal public lands.	*No Federal open season*

Proposed Federal Regulation

Proposal WP10-104

Unit 12—Caribou

Unit 12, that portion of the Nabesna River drainage within the Wrangell-St. Elias National Park and Preserve and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border— ~~The taking of caribou is prohibited on Federal public lands~~. ***1 bull by joint State-Federal drawing permit only****.*	*~~No Federal open season~~* ***Sept. 1–Sept. 30***

Proposal WP12-65

Unit 12–Caribou	
*Unit 12, that portion of the Nabesna River drainage within the Wrangell-St. Elias National Park and Preserve and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border— ~~The taking of caribou is pro(hibited on Federal public lands~~. **1 bull by Federal registration permit only**.*	*~~No Federal open season~~* ***Aug. 10–Sept. 30***

Proposal WP12-66

Unit 12–Caribou	
*Unit 12, that portion ~~of the Nabesna River drainage~~ within the Wrangell-St. Elias National Park **that lies west of the Nabesna River and the Nabesna Glacier**~~, and Preserve and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border~~*	*No Federal open season*
*Unit 12, that portion **east** of the Nabesna River and **the Nabesna Glacier,** ~~drainage within the Wrangell-St. Elias National Park and Preserve~~ and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border— **1 bull by Federal registration permit only**.*	***Sept. 1 –Sept. 30***

Existing State Regulation

Unit 12 remainder—Caribou	
Residents Only: One caribou may be taken by registration permit only during a winter season to be announced by emergency order	*Winter season to be announced*
Nonresidents	*No open season*

Extent of Federal Public Lands

Federal public lands comprise approximately 59% of Unit 12 and consist of Tetlin National Wildlife Refuge lands (approximately 11% of the lands in the Unit) and Wrangell-St. Elias National Park and Preserve lands (approximately 48% of the lands in the Unit) (**Unit 12 Map**).

Customary and Traditional Use Determinations

Rural residents of Unit 12, Dot Lake, Healy Lake and Mentasta Lake have a positive customary and traditional use determination for caribou in Unit 12. If Proposal WP12-68 is adopted by the Board, then Chistochina residents would be added to the customary and traditional use determination for caribou in Unit 12.

Regulatory History

Because of its small population size, the CCH has never supported a large harvest. Between 1989 and 1994 under State regulations, the harvest limit was 1 bull caribou and the annual harvest ranged between

16–34 animals (Gross 2007). Furthermore, between 1991 and 1994 under Federal regulations, the harvest limit was 1 bull caribou [_.23(n)(12)(ii)]. By 1991, due to declining population numbers the harvest was reduced through voluntary compliance by guides and local hunters. In 1994 the bull portion of the population declined below the ADF&G's management objective and hunting of Chisana caribou was closed by both the Alaska Board of Game and the Federal Subsistence Board. There has been no legal harvest of Chisana caribou in Alaska since 1994.

In 1989 and 1990 the reported harvest of Chisana caribou in the Yukon was 18 and 11 animals, respectively (Gross 2007). Gross also reported that the estimated unreported harvest of Chisana caribou between 1989 through 2002 ranged from 1 – 20 animals each year. After 2001, Yukon First Nation members voluntarily stopped harvesting Chisana caribou and there continues to be no legal harvest of Chisana caribou in the Yukon.

In 2010, the State of Alaska Board of Game approved a hunt for residents and nonresidents from September 1 through 30 on the CCH for one bull by drawing permit. The hunt is authorized in the portion of Unit 12 within the White River drainage and that portion within the Chisana River drainage upstream from the winter trail that runs southeast from Pickerel Lake to the Canadian Border (5 AAC 85.025(a)(7). However, on Federal Public Land the Federal closure supersedes the existing State regulation and thus Federal public lands are closed to hunting of the CCH at this time.

Current Events Involving Species

A draft five-year management plan for the CCH has been developed through a cooperative effort between Government of Yukon, Alaska Department of Fish and Game, White River First Nation, Kluane First Nation, National Park Service and U.S. Fish and Wildlife Service. The plan is expected to be finalized in the fall of 2011. Currently, the Draft Management Plan is providing the framework for monitoring the CCH population and criteria for implementing a hunt. As required by the Draft Management Plan, a census was completed in October of 2010 by the National Park Service and Alaska Department of Fish and Game. In addition to a stable or increasing population trend, the Draft Management Plan requires the observed bull:cow ratio be no be less than 35 bulls per 100 cows any one year and1 the three-year calf:cow ratio be above 15 calves per 100 cows (**Figure 1**). If for any reason an observed Chisana caribou population falls below these guidelines, no harvest will be allowed. The Draft Management Plan calls for a maximum allocation of 2% of the herd if the herd population size indicates a harvest is sustainable. The allocation is to be evenly distributed among Yukon and Alaska. The Draft Management plan further recommends a bull-only harvest to have a minimal impact on the potential herd growth.

In Tok on July 7, 2011, and in Chisana on July 8, 2011, residents of Tok and Chisana noted to OSM staff that an unanticipated effect of excluding residents of communities with customary and traditional use of caribou in Unit 12 from the opportunity to harvest Chisana caribou may be an unnecessary divisiveness between communities. These residents cautioned against excluding any qualified residents from the opportunity to harvest Chisana caribou.

At the meeting in Tok, several points were raised about the applicability of a Section 804 analysis. At the meeting in Chisana, comments were made about recent environmental changes and CCH migratory patterns:

- Given the difficulties accessing the CCH, it is unlikely that there will be any overhunting, even with a limit of seven animals. If a hunter walked to the herd from the community of Chisana, it would take a minimum of a week to hunt a caribou and then pack out harvested meat.

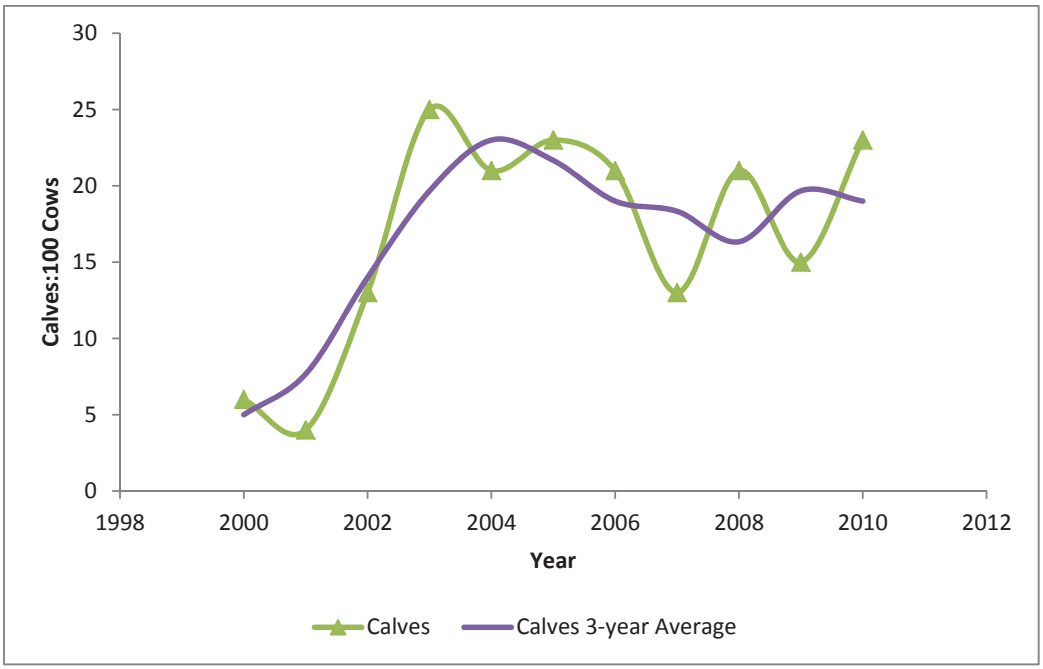


Figure 1. Chisana Caribou calves per 100 cows compared to the 3-year rollling average of calves per 100 cows, 1998 through 2010.

- The least expensive flight to Chisana is on the mail plane from Tok, which costs about $350. Given the costs associate with accessing Chisana caribou, it is unlikely that Federally qualified subsistence users identified under a Section 804 analysis will make the effort to subsistence hunt the CCH; other more readily accessible caribou are available.

- A Section 804 analysis may be premature, without first knowing the level of interest in a CCH hunt.

- Open a general registration hunt first and then, if the quota is reached, an emergency closure would be appropriate. At that point, conduct a Section 804 analysis.

- Most of the CCH hunt has been by nonresidents. On what basis can a Federal subsistence harvest, and an associated Section 804 analysis, be justified?

- The last three winters have been particularly harsh, and the summers have not been productive of good caribou forage. If this pattern continues, a shift in the CCH summer range to areas of better forage may occur.

- The CCH is fairly predictable in its movements. According to one Chisana resident, it would be relatively easy to harvest seven Chisana caribou in one day, once a hunter or group of hunters accessed the herd.

Biological Background

The CCH is a small herd inhabiting east central Alaska and southwest Yukon, Canada. Genetic analysis conducted by Zittlau et al. (2000) indicated that the herd is genetically similar to the woodland caribou

Table 1. Fall sex and age composition of the Chisana Caribou Herd, 1994 - 2010.(Modified from Adams 2007, Bentzen 2008, 2009, Gross 2007 and Putera 2011).

Date	Total Bulls:100 Cows	Calves:100 Cows	Calves (%)	Cows (%)	Bulls (%)	Composition Sample Size	Estimated Herd Size[a]
2000	20	6	5	80	15	412	425
2001	23	4	3	79	18	356	375
2002	25	13	10	72	18	258	315
2003[b]	37	25	15	62	23	603	720
2004[b]	38	21				538	
2005[b]	46	23	14	59	27	599	706
2006[b]	48	21				628	
2007[b]	50	13	8	61	31	719	766
2008	44	21	13	60	27	532	
2009	49	15	9	61	30	505	
2010	42	23	14	61	25	622	696

[a] Bases on population mode designed by P. Valkenburg and D. Reed (ADF&G).
[b] Captive rearing efforts. Calf:cow ratios observed during survey are adjusted by extrapolating the calf:cow ratio for the wild population to a total estimate of wild cows and then adding the cows and calves from the captive rearing program.

herds.[1] The CCH was first surveyed in 1977 and has been continually tracked by USGS since 1988. Since continual tracking began, the majority of Chisana caribou have been located east of the Nabesna River (Bentzen 2011).

The CCH increased through the 1980s and reached a peak of 1,900 caribou in 1988. Beginning in 1990, the CCH experienced a decline in population size. Concern over the decline led to implementation of an intensive captive rearing program in Canada, conducted between 2003 to 2006 by USGS and the Canadian Wildlife Service. The recovery effort was designed to increase recruitment and calf survival resulting in overall population growth. The radio-collaring program intensified in 2003, as a result of the captivie rearing program, and survey methods became more effective, therefore sex and age composition and herd size estimates before and after 2003 are not comparable (**Table 1**). Past declines were attributed to poor calf recruitment and high adult mortality associated with adverse weather conditions, poor habitat and predation (Gross 2007). Results from the 2010 census show the CCH population to be stable, with the herd size ranging from 696 to 766 caribou (**Table 1**). The 3-year average bull:cow ratio of 45:100 is above the minimum 35:100 ratio stated in the Draft Management Plan. The number of calves in the herd has increased since 2009. The 3-year average calf:cow ratio of 20:100 is above the minimum 15:100 ratio set in the Draft Management Plan.

Harvest History

The CCH has historically been an important food source for the Athabascans of Alaska and the First Nations of the Yukon in Canada (Gross 2007). During the early to mid-1900s, the CCH was used as a subsistence food source by the Ahtna and Upper Tanana Athabascans (see Proposal WP12-68 for an extended discussion of customary and traditional patterns of caribou use, which includes the CCH, in Unit

[1]The CCH is a genetically distinct population. The CCH acts and looks like Yukon woodland caribou, but the herd's classification is ambiguous. In Canada the CCH falls under the classification of woodland caribou while in Alaska the CCH is classified as barren-ground caribou (Richard 2002).

12). Although subsistence hunting has declined in recent years, the CCH continues to be an important aspect of Upper Tanana and Ahtna Athabascan culture. Simeone (2006) documented the cultural significance of the CCH by interviewing several key informants. In one such interview, Wilson Justin describes the Chisana caribou as highly prized,

> "*…But it's really, those caribou was really prized by the Indians of Canada all the way over here, it's kind of like a royalty, the royalty of caribou, not any Indian can hunt them, you have to be someone special…The 'alts'e'tnaey have a relationship with those caribou. No one should kill those caribou without our permission and in addition to that you have to be somebody to go out and kill those animals. Cannot just be anybody… .*"

Although hunting of CCH was closed in Alaska in 1994, First Nation members continued to harvest from the CCH in Yukon through the 1990's. After 2001, Yukon First Nation members voluntarily stopped harvesting Chisana caribou.

In addition to providing an important subsistence resource, in the late 1920s, Chisana caribou became economically important to local hunters as guided hunting became common in the Chisana area. The caribou from the Chisana herd were harvested by nonresident hunters guided by local guides through 1994 when hunting was closed. Primarily five guide/outfitters hunted the herd (4 operated in Alaska and 1 in the Yukon). Bulls were desired by sport hunters because of their large stature. From 1990-1994, 43% of the hunters participating in hunting CCH were nonresidents, who took 58% of the harvest. Local subsistence users accounted for 9% of the harvest during that time period (Gross 2007). It is unknown if the harvests by local subsistence users were guided or non-guided hunts.

Section 804 Analysis

An analysis based on Section 804 of ANILCA shall be conducted whenever a proposal to change Federal regulations requests a prioritization for use of a subsistence resource among rural residents having customary and traditional use of that resource. In this case, such an analysis is required because of the small harvestable surplus of animals in the Chisana Caribou Herd in Unit 12. Recommended harvest allocations are to be determined based on several biological parameters addressed in the Draft Management Plan. Based on the fall 2010 census, the current harvest allocation would be 14 caribou; 7 for Alaska and 7 for the Yukon. The customary and traditional use determination for caribou in Unit 12 includes the communities of Chisana, Nabesna, Northway, Tanacross, Tetlin, and Tok in Unit 12, Dot Lake and Healy Lake in Unit 20, and Mentasta Lake in Unit 13. If Proposal WP12-68 is adopted by the Board, then Chistochina residents would be added to the customary and traditional use determination for caribou in Unit 12. In that case, this 804 analysis would determine which residents of ten communities, as well as which rural residents not living in a community but residing in Unit 12, would be eligible to harvest caribou from the Chisana Herd, in the event a harvest opportunity is provided by the Board.

Section 804 of ANILCA provides a subsistence priority for the taking of fish and wildlife on Federally administered lands and waters. A subsistence priority will be implemented through appropriate limitations whenever it is necessary to restrict the taking of populations of fish and wildlife on these lands for subsistence uses in order to protect the continued viability of fish and wildlife populations, or to continue such uses. These limitations are based on the application of three criteria: 1) customary and direct dependence upon the populations as the mainstay of livelihood, 2) local residency, and 3) the availability of alternative resources. The following section addresses these criteria as they relate to rural residents with a positive customary and traditional use determination for caribou in Unit 12. Chistochina residents are included in the discussion for the reason described above. If the Board does not adopt WP12-68, then Chistochina residents would be excluded from eligibility.

1. Customary and Direct Dependence upon the Populations as a Mainstay of Livelihood

If "customary and direct dependence" is narrowly interpreted to mean that Chisana caribou provide necessary *nutritional* elements for "a mainstay of livelihood," then none of the residents of Unit 12 or of the communities outside of Unit 12 with a customary and traditional use determination for caribou in Unit 12 meet this criterion: the hunt for Chisana caribou has been closed since 1994; presumably, all rural residents with customary and traditional use determinations for caribou in Unit 12 have managed without using Chisana caribou for food between 1994 and 2011.

If "customary and direct dependence" on Chisana caribou for "a mainstay of livelihood" is more broadly interpreted to mean that Chisana caribou provide necessary *cultural* and *social* elements to local peoples' existence, then there are rural residents for whom this criterion applies. Based on evidence presented in WP12-68, which relied on Haynes and Simeone's (2007) conclusion that the ancestors of residents of Northway, Mentasta, and Chistochina were part of the Upper Chisana-Upper Nabesna band, and on Guédon's (1974) ethnographic description of Tetlin, it appears that Northway, Mentasta, Chistochina and Tetlin are the communities in Unit 12 and adjacent units whose residents exhibit customary and direct dependence on Chisana caribou.

Based on available ADF&G harvest data, between 1977 and 1993 residents of Northway, Tok and Chisana hunted Chisana caribou and thereby exhibit a "customary and direct dependence" on Chisana caribou.

There is little evidence to suggest that residents of Nabesna, Tanacross, Dot Lake and Healy Lake have a customary and direct dependence on Chisana caribou. Research has uncovered neither documentary evidence relating to any cultural or social ties between residents of these communities and the Chisana Caribou Herd nor any harvest data to indicate that residents of these communities hunted the Chisana Caribou Herd (Bentzen 2011, pers. comm.).

Based on the available evidence, it appears that residents of six of ten communities exhibit a customary and direct dependence on Chisana caribou, including Tok, Northway, Chistochina, Chisana, Mentasta, and Tetlin. The available evidence does not indicate which, if any, rural residents of Unit 12 not affiliated with a community are eligible for consideration under the "customary and direct dependence" criterion. Additional information from the Eastern Interior Regional Advisory Council and the public is sought regarding whether or not residents of Nabesna, Tanacross, Dot Lake and Healy Lake have a customary and direct dependence on the Chisana Caribou Herd.

2. Local Residency

Chisana, Nabesna, Tanacross, Tetlin, and Tok are within Unit 12, Chistochina is on the border between Unit 11 and Unit 13, but falls in Unit 13, Dot Lake and Healy Lake are in Unit 20, and Mentasta Lake is within Unit 13 (**Unit 12, 13 and 20 Maps**). From the point of view of customary and traditional use determinations for caribou, all of these communities may be considered to have local residency; Chistochina is the exception, pending Board determination.[2]

From the point of view of geographic proximity, Chisana is closest to the CCH area. If geographic proximity is the only measure of local residency, then only Chisana residents clearly qualify as local

[2]A customary and traditional use determination is based on a holistic assessment of eight factors; see Proposal WP12-68 for an application. Factor 4 refers to "the consistent harvest and use of fish or wildlife as related to past methods and means of taking: near, or reasonably accessible from the community or area." "Near or reasonably accessible" may be interpreted to indicate local residency.

residents. Residents of Dot Lake and Healy Lake, by contrast, are at the greatest distance from the CCH area and could be excluded from local residency.

Based on the available evidence, it appears that residents of eight communities exhibit "local residency" if the criteria is geographic proximity. These communities include Chisana, Nabesna, Northway, Tanacross, Tetlin, Tok, Mentasta Lake and Chistochina (pending Board adoption of WP12-68). The available evidence does not indicate which, if any, rural residents of Unit 12 not affiliated with a community are eligible for consideration under the "local residency" criterion.

3. Availability of Alternative Resources

If availability of alternative resources refers to the availability of harvestable caribou in other areas, then all of the residents of the communities under consideration have alternative resources. Residents of Chistochina and Mentasta, who reside in Unit 13, have a customary and traditional use determination for caribou in Unit 13, which includes the opportunity to subsistence hunt caribou from the Nelchina Caribou Herd. Residents of Dot Lake and Healy Lake, who reside in Unit 20D, have a customary and traditional use determination for caribou, which includes the opportunity to subsistence hunt caribou from the Fortymile Caribou Herd; along with other residents of Unit 20D, they also have a customary and traditional use determination for caribou in Unit 13B. Rural residents in Unit 12 north of Wrangell-St. Elias National Preserve (Northway, Tetlin, Tanacros), in addition to having a customary and traditional use determination for that unit, have a customary and traditional use determination for caribou in Unit 20D and Unit 20E. Rural residents in Unit 12 along the Nabesna Road, in addition to a customary and traditional use determination for that unit, have a customary and traditional use determination for caribou in Units 13A, 13C, 13D, and 13E; rural residents in Unit 12 along the Nabesna Road and Tok Cutoff Road have a customary and traditional use determination for caribou in Unit 13B.

Because harvest opportunities exist for caribou other than Chisana caribou, it appears that residents of these communities have alternatives if the availability of alternative resources is based solely on food considerations. These communities also have other subsistence resources available to them, such as moose, sheep, and bear.

The Section 804(3) question could also be interpreted to ask whether local peoples perceive any alternative to Chisana caribou, or whether there are no alternatives. The existing literature, including oral histories of people who traditionally hunted Chisana caribou, is suggestive (see WP12-68 for references). As noted in WP12-68, Chisana caribou appear to be unique and occupy a particularly special status for descendants of the Upper Chisana-Upper Nabesna band. The descendants of the Upper Chisana-Upper Nabesna band live today in Chistochina, Northway, Mentasta and Tetlin. For residents of these communities, other caribou may not provide an alternative to the Chisana caribou when viewed from the perspective of its cultural importance to these residents.

The caribou may also be unique from the perspective of other local subsistence users. Local guides who used to hunt the CCH indicate that Chisana caribou are particularly large with unusually large antlers and are therefore especially valued (D. Overly 2011, pers. comm.; T. Overly 2011, pers. comm.; Joe 2011, pers. comm.). Former guides of the CHH currently reside in Chisana, Chistochina, Mentasta and Tok. For these guides, the CCH has a particular importance other than providing food.
If the availability of alternative resources is solely based on considerations of calories, then all of the communities subject to this 804 analysis have alternatives, even within the same species. If, however, the measure of an alternative resource includes cultural and social considerations, then it appears that for descendants of the Upper Chisana-Upper Nabesna band, there are no alternatives. For this reason, the Board may consider residents of Chistochina, Northway, Mentasta and Tetlin to have no alternatives to

Chisana caribou, and under Section 804(3) should be given a subsistence priority for Chisana caribou over residents of Tok, Dot Lake, Healy Lake, Chisana, Nabesna and Tanacross. However, other cultural and social values are also prevalent and are associated with the history of guiding in the area. For former guides who currently live in Mentasta, Tok and Chisana, there may be no alternatives to Chisana caribou. For this reason, residents of Tok and Chisana should be included with residents of Chistochina, Northway, Mentasta, and Tetlin under this criterion. The available evidence does not indicate which, if any, rural residents of Unit 12 not affiliated with a community are eligible for consideration under the "alternative resources" category.

Summary of 804 Analysis

The Section 804(1) analysis determines that residents of Chisana, Chistochina, Northway, Mentasta, Tetlin, and Tok exhibit the greatest customary and direct dependency on the CCH. The Section 804(2) analysis makes the determination that Chisana, Chistochina, Nabesna, Northway, Tanacross, Tetlin, Tok, and Mentasta Lake and should be included based on local residency. The Section 804(3) analysis determines that there are no alternatives to Chisana caribou for residents of Chisana, Chistochina, Northway, Mentasta, Tetlin, and Tok, and that these communities should be granted a subsistence priority over Dot Lake, Healy Lake, Nabesna, and Tanacross.

On balance, the Section 804 Analysis determines that Chisana, Chistochina, Mentasta, Northway, Tetlin, and Tok and should be provided a subsistence priority over Dot Lake, Healy Lake, Nabesna and Tanacross.

The Eastern Interior Regional Advisory Council, the Southcentral Regional Advisory Council, and public review may bring more information forward for consideration.

The decision of how to apportion the opportunity for a subsistence harvest of seven caribou over residents of six communities will be further discussed by the appropriate Councils. Such discussion may also provide information for including residents who are not affiliated with any community but have customary and traditional use of caribou in Unit 12.

Effects of the Proposal

If adopted, these proposals would establish a hunt in an area and on a population that is currently closed to all harvest (hunting opportunity of the Chisana Caribou Herd was closed in 1994). The Draft Management Plan establishes the harvestable quota; this quota allows for a conservative harvest as long as the population remains stable and the bull:cow and calf:cow ratios are above the minimum requirements. The 2010 Census confirmed that the CCH is above the Draft Management Plan thresholds. If a hunt opportunity is adopted, the Federal Subsistence Board will need to consider whether or not the closure should be lifted to all users, or lifted only for Federally qualified users. If the closure is lifted for all users, both Federally qualified subsistence users and non-Federally qualified users could harvest Chisana caribou. The hunt managers would be tasked with developing an allocation system to limit the number of hunt permits.

If the closure is lifted for Federally qualified users only, the harvestable surplus of the CCH in Unit 12 is small and the number of Federally qualified users, as identified by the customary and traditional use determination, far exceeds that small number. Whenever a proposal to change Federal regulations seeks a prioritization for use of a subsistence resource among rural residents having customary and traditional use of that resource, an analysis must be done in accordance with Section 804 of ANILCA.

If a Federal subsistence hunt of the CCH is established, the Wrangell-St. Elias National Park and Preserve superintendent would be the CCH hunt manager. The authority to manage the hunt could be granted with a letter of delegation from the Federal Subsistence Board. Under 36 CFR 242.10 (d)(6) and 50 CFR 100.10 (d)(6), the Federal Subsistence Board has the authority to delegate authority to modify or restrict harvest limits, season dates, and methods and means.

The Section 804 analysis offers a rationale to provide residents of six of ten communities the opportunity to subsistence harvest Chisana caribou. These communities include Northway, Mentasta, Tetlin, Chistochina, Tok, and Chisana. If this proposal is adopted, precisely how these six communities would allocate seven caribou would have to be determined.

Excluding residents of communities with customary and traditional use for caribou in Unit 12 from hunting Chisana caribou may result in divisiveness between communities. In discussions with OSM staff about a Section 804 analysis, residents of Tok and Chisana expressed concern about this possible effect.

While Proposals WP12-65 and WP12-66 would provide for a Federal subsistence hunt and have equal merit, Proposal WP12-66 limits the hunt area to east of the Nabesna River and Nabesna Glacier in Unit 12. Historically this area has been the core range of the CCH. Restricting the hunt area should protect the Mentasta Caribou herd while having minimal impact to subsistence hunters wanting to harvest a caribou from the CCH.

OSM PRELIMINARY CONCLUSION

Take No Action Proposals WP 10-104 and WP12-65.

Support Proposal WP12-66 **with modification** to list the communities allowed to harvest caribou in Unit 12, that portion east of the Nabesna River and the Nabesna Glacier, and lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border: Northway, Mentasta, Tetlin, Tok, and Chisana, and, if Proposal WP12-68 is adopted by the Federal Subsistence Board, Chistochina.

The modified regulation would read:

Unit 12—Caribou

Unit 12, that portion ~~of the Nabesna River drainage~~ within the Wrangell-St. Elias National Park ***that lies west of the Nabesna River and the Nabesna Glacier****~~, and Preserve and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border~~*	*No Federal open season*
Unit 12, that portion ***east*** *of the Nabesna River and* ***the Nabesna Glacier,*** *~~drainage within the Wrangell-St. Elias National Park and Preserve~~ and ~~all Federal Public lands~~ south of the Winter Trail running southeast from Pickerel Lake to the Canadian border—* ***1 bull by Federal registration permit only****.* ***Federal public lands are closed to the harvest of caribou except by residents of Chisana, Chistochina, Mentasta, Northway, Tetlin, and Tok.***	***Sept. 1 –Sept. 30***

Justification

The Alaska range of the Chisana Caribou Herd is primarily within the Wrangell-St. Elias National Park and Preserve. Federal subsistence regulations (36 CFR 100.10 (4)(v) and 50 CFR 100.10 (4)(v)) mandate the taking of fish and wildlife on Federal public lands for subsistence uses shall be given priority over the taking of fish and wildlife for other purposes. The Draft Management Plan is scheduled to be completed before the fall Regional Advisory Council meetings and the most recent census indicates that CCH could sustain a small harvest. While Proposals WP12-65 and WP12-66 would provide for a Federal subsistence hunt and have merit, Proposal WP12-66 supports a more conservative approach. Historically, very few Chisana caribou have migrated west of the Nabesna River and Nabesna Glacier in Unit 12. Restricting the hunt to east of the Nabesna River and Nabesna Glacier will protect the Mentasta Caribou herd with minimal impact to subsistence hunters wanting to harvest a caribou from the CCH. In addition, Proposal WP12-66 suggests a shorter hunting season. Since no harvest from the CCH has occurred since 1994, a cautious approach is warranted. If this time period proves to be too conservative, a proposal lengthening the hunting season could be submitted to the Office of Subsistence Management in the future. The Section 804 analysis offers a rationale to provide residents of Chisana, Chistochina, Mentasta, Northway, Tetlin, and Tok a subsistence priority over residents of Dot Lake, Healy Lake, Nabesna and Tanacross (Chistochina would be included only if Proposal WP12-68 is adopted by the Board). The Eastern Interior Regional Advisory Council, the Southcentral Regional Advisory Council, and public review may bring more information forward for consideration.

LITERATURE CITED

Bentzen T. 2009. Wildlife Biologist. Personal communication, ADF&G, Tok, AK.

Farnell, R. and C.L. Gardner. 2002. Status of the Chisana Caribou Herd, 2002.Yukon Department of the Environment, Whitehorse, Yukon, Canada.

Chisana Caribou Herd Working Group. 2010. Draft Management plan for the Chisana caribou herd: 2010–2015. Government of Yukon, Department of Environment, Whitehorse, YT. 30pp.

Gross, J.A. 2007. Unit 12 caribou. Pages 56–64 *in* P. Harper, editor. Caribou management report of survey and inventory activities 1 July 2004–30 June 2006. Alaska Department of Fish and Game. Project 3.0 Juneau, AK.

Guédon, M. 1974. People of Tetlin, Why are you Singing? National Museum of Man, Mercury Series, Paper No. 9.

Hayes, T. L. and W. E. Simeone, 2007. Upper Tanana ethnographic overview and assessment, Wrangell St. Elias National Park and Preserve. Alaska Depart of Fish and Game, Div. of Subsistence Technical Paper No. 325. Juneau, AK.

Jenkins, K.J., Barten, N.L., 2005, Demography and decline of the Mentasta Caribou Herd, Alaska: Canadian Journal of Zoology, v. 83, p. 1174–1188.

Joe, G. 2011. Resident of Chistochina. Personal Communication, phone and in-person. Chisana, AK.

Overly, D. 2011. Resident of Tok. Personal Communication, in-persons. Tok, AK

Overly, T. 2011. Resident of Chisana. Personal Communication, in-person. Chisana, AK.

Putera J. 2011. Wildlife Biologist. Personal communication, Wrangell-St. Elias National Park and Preserve, Copper Center, AK.

SCRAC. 2010. Transcripts of the Southcentral Alaska Subsistence Regional Advisory Council meeting, May 11–12, 2010, in Anchorage, Alaska. Office of Subsistence Management, FWS. Anchorage, AK.

SCRAC. 2011. Transcripts of the Southcentral Alaska Subsistence Regional Advisory Council meeting, March 10–11, 2011, in Anchorage, Alaska. Office of Subsistence Management, FWS. Anchorage, AK.

Simeone, W. E. 2006. Some Ethnographic and Historical Information on the Use of Large Land Mammals in the Copper River Basin. National Park Service, Wrangell-St. Elias National Park and Preserve, Copper Center, AK. pages 8 – 12.

Zittlau, K., J. Coffin, R. Farnell, G. Kuzyk, and C. Strobeck. 2000. Genetic relationships of the Yukon woodland caribou herds determined by DNA typing. Rangifer Special Issue 12:59–62

ADF&G Comments on WP12-24, 65, 66, and WP10-104
August 30, 2011; Page 1 of 2

Alaska Department of Fish and Game
Comments to Regional Advisory Council

Wildlife Proposals WP12-24, 65, 66, and Deferred WP10-104: Chisana Caribou

This group of proposals request different variations of allowing limited harvest of caribou from the Chisana herd.

WP12-24: Requests approval of a federal subsistence bull caribou hunt in an identified portion of Unit 11 and Unit 12 remainder targeting the Chisana herd. The proposal also recommends permitting, quotas, and closures be established by the Federal inseason manager following consultation with ADF&G.

WP12-65: Requests in Unit 12 – that portion of the Nabesna River drainage within the Wrangell-St. Elias National Park and Preserve and all Federal public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border–1 bull by Federal registration permit only. The proposal recommends the hunt be managed in accordance with the recommendations in the Chisana Herd Management Plan (Plan). The proposal requests closure of the hunt to non-federally qualified hunters.

Open Season – Aug. 10 – Sept 30

The Chisana caribou herd management plans sets guidelines for opening a limited hunt on the herd while protecting the herd from overharvest.

WP12-66: Requests approval of a federal subsistence caribou hunt targeting the Chisana caribou herd in that portion of Unit 12 east of the Nabesna River and the Nabesna Glacier, and south of the Winter Train running southeast from Pickerel Lake to the Canadian border – one bull by federal Registration permit. This proposal also request no federal open season in that portion of Unit 12 within the Wrangell-St. Elias national park that lies west of the Nabesna River and Nabesna Glacier. The proposal requests total closure to non-federally qualified hunters until federal subsistence user needs are identified and a quantifiably harvest amount is produced to determine if the federal subsistence priory is being met (at least three year process).

Deferred Wildlife Proposal WP10-104: Establishes a joint federal/state draw permit hunt for the Chisana caribou herd starting fall 2011, following recommendations in the draft Management Plan for the Chisana Caribou, 2010-2015, released April 22, 2010, for public review. The management plans sets guidelines for opening a limited hunt on the herd while protecting the herd from overharvest.

Introduction: In the 1980s and early 1990s, an average of 29 Chisana caribou were harvested annually with about 60% of the harvest taken by Alaska residents. Following a decline in the herd in the early 1990s, hunting in Alaska and Canada was stopped. Between 2003 and 2006 a captive rearing program was conducted by the Yukon Department of Environment which successfully increased the number of calves recruited

into the population during the recovery effort. From 2004 through 2008, the population has been stable and is estimated at 700-800 caribou.

The Chisana Caribou herd management plan, drafted by Yukon Department of Environment, White River First Nation, Canadian Wildlife Service, National Park Service (Wrangell St. Elias), US Fish and Wildlife Service and Alaska Department of Fish and Game was recently finalized.

Impact on Subsistence Users: Access to the Chisana caribou herd is difficult and is mostly limited to aircraft. Harvest by federally-qualified subsistence users in Unit 12 averaged less than 2 caribou between 1981-1983 and 1990-1993. Adoption of WP12-24, 65, or 66 may provide a few federal subsistence hunters the opportunity to harvest a bull caribou from the Chisana herd.

Opportunity Provided by State: State regulations limit caribou hunting in Unit 12 to one bull caribou west of the Glenn Hwy (Tok Cutoff) and have not provided any opportunity for harvesting Chisana caribou since 1993.

Conservation Issues: The Chisana caribou management plan recommends a 2% bulls only harvest if the herd remains increasing or stable, the bull/cow ratio does not fall below 35/100, and calf recruitment remains above 15 calves/100 cows over a three year average. It is unlikely a limited harvest would have any negative impact on the herd.

Enforcement Issues: A drawing hunt for both federally qualified and non-federally qualified users would have few enforcement issues. If the Federal Subsistence Board chooses to limit this hunt to federally qualified users, all enforcement efforts would be the responsibility of the respective land managers.

Other Comments: The guidelines set forth for a harvest in the management plan are based on the 2010 census in which the herd met the required population level, bull/cow and calf cow ratios.

Recommendation: Support portions of all four proposals with modification. We recommend following the guidelines for a limited harvest of Chisana caribou shared between Alaska and Canada as is laid out in the management plan and further recommend using a joint state/federal permit to monitor harvest in Alaska. A joint federal/state drawing permit would ensure continued cooperation between state and federal managers that work together to develop the herd management plan.

If the harvest is limited to federal subsistence users only, a registration hunt should be used and the season closed if the quota is met. Based on harvest records since the 1970s, the remote nature (aircraft access only), the likelihood of harvesting the quota is unlikely. A short reporting period should be adequate to ensure over harvest does not occur.

WP12-68 Executive Summary	
General Description	Proposal WP12-68 requests the residents of Chistochina be added to the Unit 12 caribou customary and traditional use determination. *Submitted by the Cheesh'na Tribal Council*
Proposed Regulation	**Customary and Traditional Use Determination—Unit 12—Caribou** *Rural residents of Unit 12,* ***Chistochina****, Dot Lake, Healy Lake, and Mentasta Lake.*
OSM Preliminary Conclusion	**Support**
Southcentral Regional Council Recommendation	
Eastern Interior Regional Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP12-68

ISSUES

Proposal WP12-68, submitted by the Cheesh'na Tribal Council, requests the residents of Chistochina be added to the Unit 12 caribou customary and traditional use determination.

DISCUSSION

Chistochina is located in Unit 13C just outside the border of Unit 12. Chistochina residents already have a positive customary and traditional use determination for moose, brown bear, and sheep in Unit 12. Mentasta Lake in Unit 13C also has a positive customary and traditional use determination in Unit 12 for caribou. The Cheesh'na Tribal Council requests that Chistochina should be added to the list of communities with positive customary and traditional use determination for caribou in Unit 12, to be consistent with Mentasta Lake. Chistochina already has a positive customary and traditional use determination for caribou in Unit 13.

The proponent states that customary and traditional use determinations made by the Alaska State Board of Game were originally based on herds rather than Game Management Units. Initial customary and traditional use determinations for caribou under Federal Subsistence Management regulations for Unit 12 were adopted from the State for Nelchina and Fortymile herds, but not for the Chisana Caribou Herd. Current unit specific Federal customary and traditional use determinations for caribou are based on species not herd due to the migratory nature of caribou.

Existing Federal Regulation

Customary and Traditional Use Determination—Unit 12—Caribou

Rural residents of Units 12, Dot Lake, Healy Lake, and Mentasta Lake.

Proposed Federal Regulation

Customary and Traditional Use Determination—Unit 12—Caribou

*Rural residents of Unit 12, **Chistochina**, Dot Lake, Healy Lake, and Mentasta Lake.*

Extent of Federal Public Lands

Federal public lands comprise approximately 58% of Unit 12 and consist of 47% National Park Service lands managed by Wrangell-St. Elias National Park and Preserve and 11% U.S. Fish and Wildlife Service lands managed by Tetlin National Wildlife Refuge (**Unit 12 Map**).

Regulatory History

In 1996, the Federal Subsistence Board deferred Proposals 56 and 57 that requested expanding the customary and traditional use determinations for caribou in Unit 12; however, these proposed customary and traditional use determinations were based on herds rather than units and councils requested that the Federal Subsistence Management Program make customary and traditional use determinations by unit.

Chistochina's uses of caribou were reviewed in these analyses (FSB 1996:20–28). In 1997, the Federal Subsistence Board addressed eight proposals in a combined analysis, Proposal 24 (FSB 1997:80–98). The Board made customary and traditional use determinations for caribou in Unit 12 to include a few communities outside of Unit 12, including Dot Lake in Unit 20 and Mentasta Lake in Unit 13 (62 FR 29021 May 29,1997) and Healy Lake in Unit 20 (63 FR 35338 June 29, 1998). Since 1998, there have been no additional customary and traditional determinations for caribou in Unit 12.

Community Characteristics

The village of Chistochina began as an Ahtna fish camp. In 1897, the access road to the village became part of the Valdez-Eagle Trail, built by miners during the gold rush to the Eagle area. The road was then used in the early twentieth century for the construction of U.S. Army Signal Corps telegraph lines from Valdez to Eagle. Gold was mined along the upper Chistochina River and its runoff creeks. The area was later settled by homesteaders, but has remained a traditional Native village. The Federally recognized Cheesh-na Tribe is located in the community (DCRA 2011). The 2000 U.S. census indicates that 93 people live in Chistochina (U.S. Census 2000).

Eight Factors for Determining Customary and Traditional Uses

A community or area's customary and traditional use is generally exemplified through eight factors: (1) a long-term, consistent pattern of use, excluding interruptions beyond the control of the community or area; (2) a pattern of use recurring in specific seasons for many years; (3) a pattern of use consisting of methods and means of harvest which are characterized by efficiency and economy of effort and cost, conditioned by local characteristics; (4) the consistent harvest and use of fish or wildlife as related to past methods and means of taking: near, or reasonably accessible from the community or area; (5) a means of handling, preparing, preserving, and storing fish or wildlife which has been traditionally used by past generations, including consideration of alteration of past practices due to recent technological advances, where appropriate; (6) a pattern of use which includes the handing down of knowledge of fishing and hunting skills, values, and lore from generation to generation; (7) a pattern of use in which the harvest is shared or distributed within a definable community of persons; and (8) a pattern of use which relates to reliance upon a wide diversity of fish and wildlife resources of the area and which provides substantial cultural, economic, social, and nutritional elements to the community or area.

The Board makes customary and traditional use determinations based on a holistic application of these eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)). In addition, the Board takes into consideration the reports and recommendations of any appropriate Regional Advisory Council regarding customary and traditional use of subsistence resources (50 CFR 100.16(b) and 36 CFR 242.16(b)). The Board makes customary and traditional use determinations for the sole purpose of recognizing the pool of users who generally exhibit the eight factors. The Board does not use such determinations for resource management or restricting harvest. If a conservation concern exists for a particular population, the Board addresses that concern through the imposition of harvest limits or season restrictions rather than by limiting the customary and traditional use finding.

Specific information on each of the eight factors is not required because a community or area seeking a customary and traditional use determination only has to "generally exhibit" the eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)).

Historically, members of the Upper-Chisana-Upper Nabesna band occupied the north area of the Wrangell-St. Elias Mountains, hunted caribou in the Nutzotin and Mentasta Mountains, and hunted and trapped in the basins of several rivers, including the White, Nabesna, and Chisana Rivers. With a

shift to village life in the late-nineteenth and early twentieth centuries, Upper Chisana-Upper Nabesna band members moved to Northway, Mentasta, and Chistochina (Haynes and Simeone 2007:10) and to Tetlin (Guédon 1974), where their descendants continue to live. This shift was accompanied by other changes, occasioned by the influx of gold miners in the area. Athabascan residents supplied fish and game to mining camps and hauled freight for cash, mixing subsistence activities with the emerging market economy. Later changes were brought about by World War II and the development of a road system in the area. Despite all of the changes, a mixed economy continues to characterize the region; an important component of this economy is a reliance on subsistence-caught food (Guédon 1974; Reckord 1983b).

Documentary evidence demonstrates that members of the Upper Chisana-Upper Nabesna band hunted caribou in what is now Unit 12 (**Map 1**). Archaeological evidence from nineteenth century sites shows high use of caribou. At Paxson Lake, for example, at a site inhabited between 1850 and 1860, 99 percent of recovered bones were from caribou (Ketz 1983). Eighteenth and nineteenth century traveler's accounts also indicate local dependence on caribou (e.g. Grinev 1993; Wrangell [1839] 1980). Wrangell noted that the main activity of local peoples was hunting caribou. In the spring, hunters used fences to guide caribou into areas where they could be killed. These harvest techniques are thought to indicate periods of caribou abundance (Rohn 1900; Skoog 1968). In the fall, hunters drove caribou into lakes and ponds and speared them from canoes. "The existence of the tribe depends on the size of the hunt," Wrangell noted, "for it depends on the animal for food and clothing."

Early and mid-twentieth century descriptions indicate a continued dependence on caribou (Case 1986; Guédon 1974; McKennan 1959; Mishler and Simeone 2006). Robert McKennan, who visited the area on the eastern side of what became Wrangell-St.Elias National Park in 1929–1930, described abundant caribou around Chisana. He described groups of caribou in the area containing as many as 2,000 animals. McKennan noted the following:

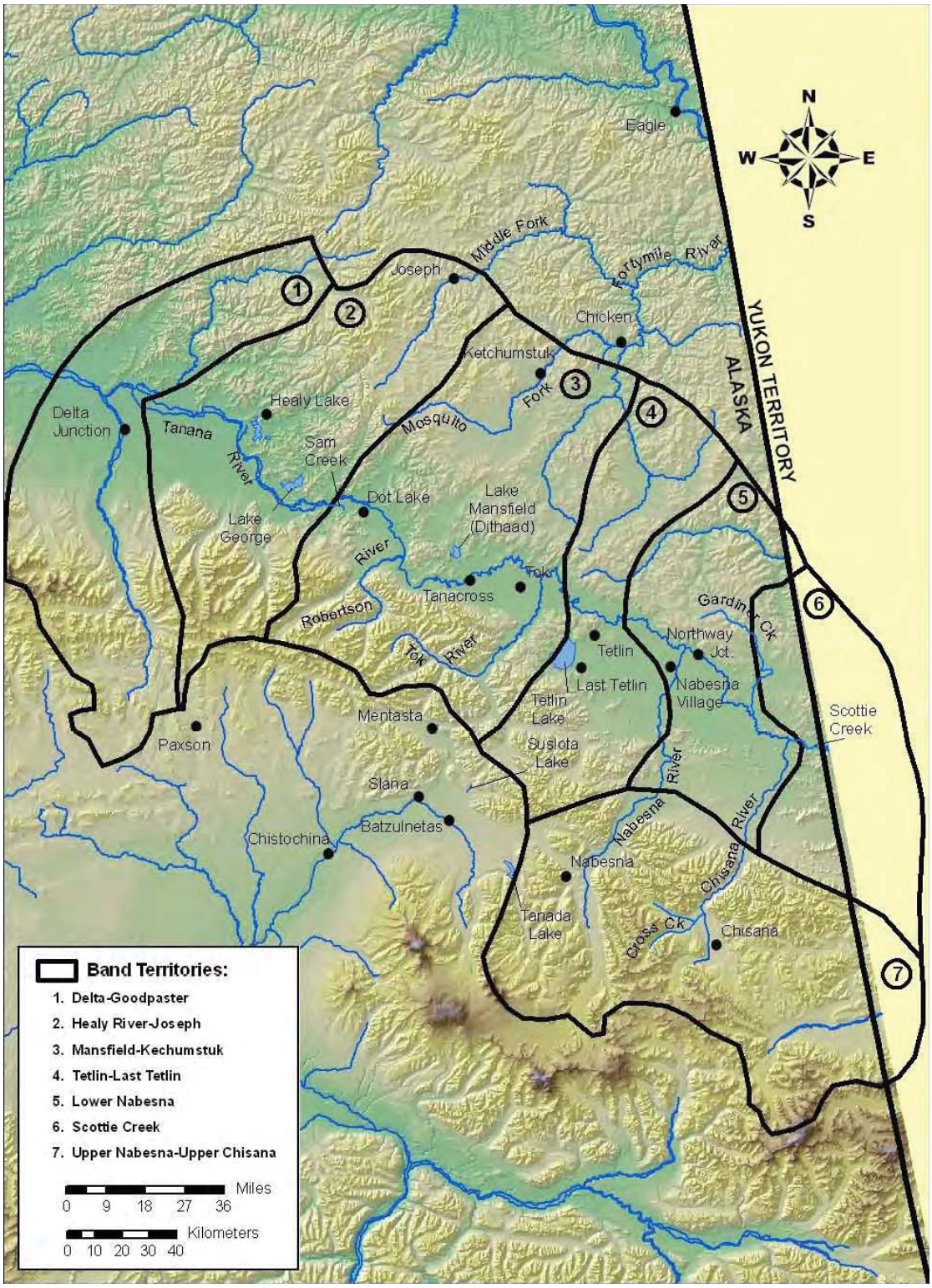
> The economic life of the Upper Tanana centers around the caribou. Not only does the animal constitute the source of food for the natives and their dogs, but it also supplies the material for their clothing, shelters and boots as well as netting for their snowshoes and babiche and sinew for their snares, cords and lashings (McKennan 1959:47).

In reconstructing the historic lifeways of the Lower and Upper Ahtna, who had close ties with Upper Tanana people, de Laguna and McKennan (1981:648) state that:

> While there were caribou in the Klutina area, and probably elsewhere in Lower Ahtna country where they are no longer, the Middle and Upper Ahtna were able to expoit part of the great Yukon-Tanana herd, which occasionally came as far south as Copper Center. Mentasta Ahtna often joined Upper Tanana relatives to work the profitable caribou fence at Ketchumstuk on the upper Tanana drainage.

Similarly, Guédon, who conducted anthropological fieldwork among the Upper Tanana in the early 1970s, described Upper Tanana seasonal rounds for several groups (Last Tetlin, Tetlin, Nabesna, Upper Nabesna-Chisana, Mansfield, Ketchumstuk). Her descriptions (Guédon 1974:38–52) include opportunistic hunting of caribou throughout the year, with concentrated effort at times of migration in the fall (October–November) and spring (April, May, June).

Linguist James Kari (1986) translated and compiled stories from Upper Tanana and Ahtna elders, including stories about the importance of caribou. Fred John, an Upper Ahtna elder, described his childhood after his father had died and his mother provided for the family: "Then, there during the winter,



MAP 1. Upper Tanana region: band territories and villages (Haynes and Simeone 2007:9).

mother set snares for caribou. Caribou would come into the area and she would snare caribou…" (Kari 1986:128).

Adam Sanford, an Upper Ahtna elder, described the annual round of resource use in the Chistochina area, and a specific journey from the mouth of the Sanford River up to the Sanford Glacier and north, on the eastern slopes of Mount Sanford, and then back to the Copper River, "…then we would go up into the country for sheep and moose and caribou." Sanford, who may have been describing Chisana caribou, later noted that

> …not much moose (around) that time…There were only caribou. The next place upriver, 'Creek that has no water', we came back that far. There then, then caribou, we came back among the caribou. There were lots of caribou, summer caribou (Kari 1986:164–165).

In interviews with Ahtna and Upper Tanana elders concerning land use in the area done in preparation for the over-the-horizon backscatter radar system installation by the U.S. Air Force, a number of references are made to historic caribou and caribou hunting. In one interview, Katie John, an Upper Ahtna elder, described the historic seasonal round:

> …Then they move out around September. Then they go out get moose, caribou, sheep, bear, marmot, porcupine, and they all dry, everything they dry, smoke it with the fire, no sun dry. The don't sue sun too much for drying things. The meat they put it all away…they get those birch bark and they gut in inside and they sew it together and they make package. And then they bring it back home when they move back and they just bring it back like that and they put it in the cache (Katie John, in Ahtna 1988:2).

Recent oral histories also demonstrate the significance of caribou in the area of Unit 12 in the first half of the twentieth century. William Simeone (2006:7–12) interviewed a number of residents in the area in 2004, and cites interviews of area residents conducted by other researchers. Robert Marshall, for example, who lived in the 1930s around Lower Tonsina, "described a caribou migration route that took the caribou across the Copper River in the vicinity of Lower Tonsina and Kenny Lake, passed Tonsina Mountain, 'up top the Klutina Glacier,' to Tolsona Lake and on to the calving grounds at the head of the Nelchina River." Simeone notes that Virginia Pete, "whose family hunted and trapped in the vicinity of Crosswind Lake," recalled abundant caribou: her family "used to see it on the lake [Crosswind Lake] thousands of them we see when we travel with dog team" (Simeone 2006:7–8).

In addition to archaeological, historical and contemporary evidence, linguists have documented the complex set of terms used to refer to caribou (Kari 1990), which indicates the importance of caribou in local culture. Ahtna terms distinguish between lead caribou, baby caribou, bull caribou, calf caribou; caribou during different seasons; caribou that do not migrate; medium sized caribou; rutting caribou; young male caribou; and caribou without neck hair, among others.

The literature shows that caribou were part of a larger Athabascan reliance on a diversity of fish and game species. These included salmon, moose, black bear, arctic hare, Dall sheep, mountain goat, beaver, ground squirrel, and various species of birds, as well as a variety of furbearers such as marten, ermine, mink, river otter, and wolverine (Reckord 1983b:25).

In her study of wild resource use in Northway, which included data on hunting between 1920–1960, Martha Case (1986:28–29) notes the following:

> From September until later in the fall (November) when the Fortymile caribou herd passed through the lower Chisana drainage heading southeast into Canada, concerted caribou hunting took place, and again members of the Chisana band came down to Scottie Creek to hunt. Members of the Old Nabesna band moved north into the Ladue River hills to camp and hunt caribou. Caribou was a dietary mainstay, contributing, according to one respondent, the same amount to the diet as moose. McKennan (1959:32, 47) observed that caribou constituted a greater proportion of the diet than moose in 1929–30.

In 2004, William Simeone (2006) interviewed Wilson Justin (currently tribal administrator for the Cheesh'na Tribal Council) about the Chisana Caribou Herd (**Map 2**). Justin had grown up and worked as a second generation hunting guide in the area. He described the Chisana Herd and his clan's—the 'Alts'e'tnaey clan's—close relationship with the caribou.

> Those caribou belong to the 'alts'e'tnaey clan. We are interested in their well-being and we need to be told where the caribou are and that's all we or the managers need to know. The 'alts'e'tnaey have a relationship with those caribou. No one should kill those caribou without our permission and in addition to that you have to be somebody to go out and kill those animals. Cannot just be anybody (Simeone 2006:11).

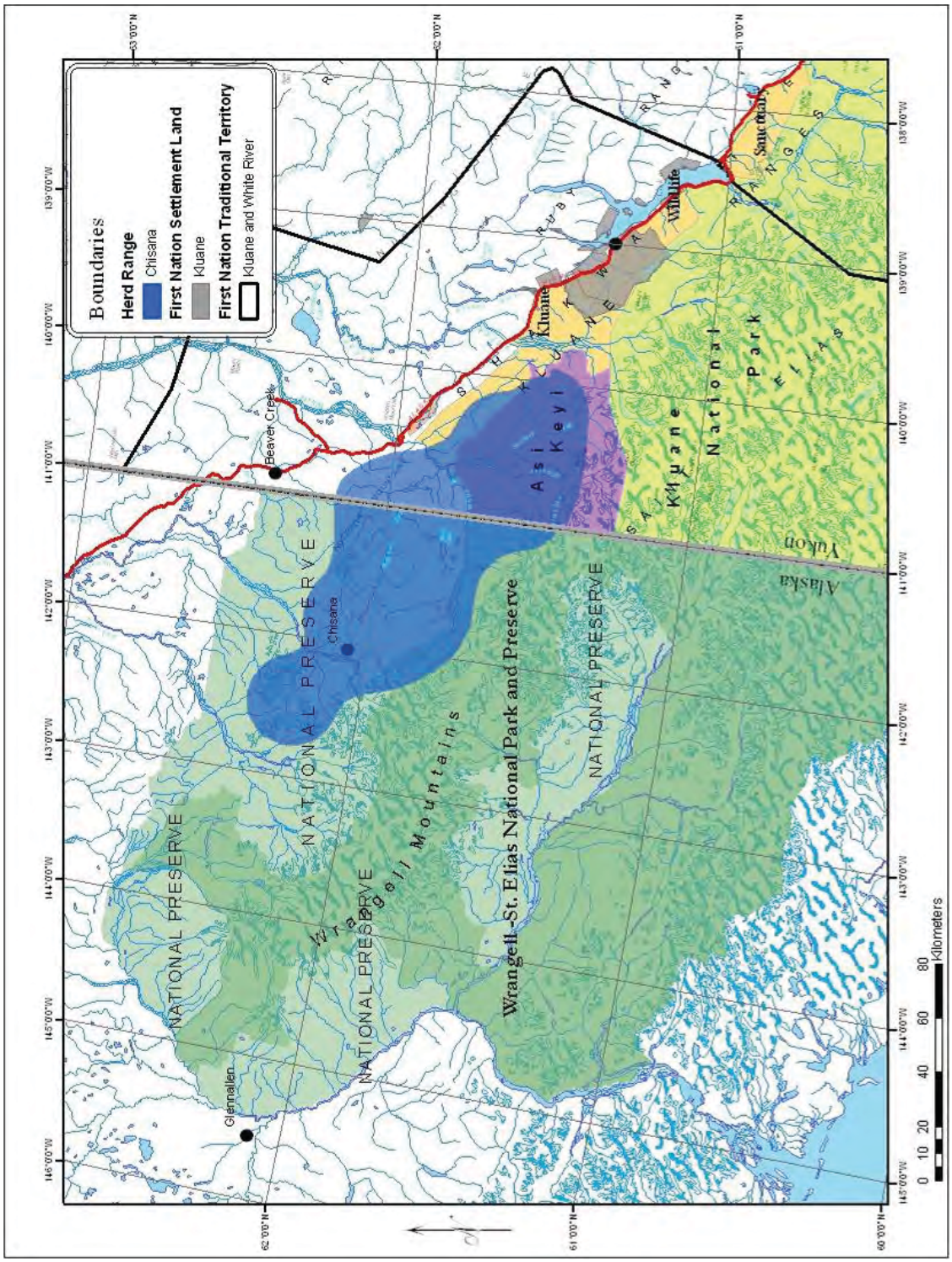
Justin later clarified his clan's relationship to the caribou. At the March 10, 2010 Southcentral Alaska Subsistence Regional Advisory Council meeting, Justin noted the following:

> In the area that I'm from, there were three tribes had what you would call sway over the area in term of the alts'e'tnaey trail that comes through there and they were the Naltsiine…out of Northway and the Alts'e'tnaey.[1] We shared pretty much ownership of the trail.
>
> That caribou herd that we're talking about was under the province of the Naltsiine. The Naltsiine were the medicine men clan and these medicine people pretty much kept that—control and reins over the use and take of these caribou to the exclusion of the other clans including the Alts'e'tnaey.
>
> …the Alts'e'etnaey in my estimation was the successor-in-interest to the Naltsiine over these carbou because the Naltsiine had pretty much faded out of the picture and into the background (SCRSAC 2010:340–341).

In his testimony before the Southcentral Council, Justin provided further historical background:

> Now, the issue of the treaty part really is intriguing because from the family history, there were people like Titus Joe and Titus John who lived near Burwash Landing and were allowed to pursue these caribou, there were Naltsiine all the way into Canada.
>
> Likewise Canadian Indians came up the White River all the way to the headwaters of Chitina and over as far as the very near to the—this side of Chisana in hunting these caribou. So the Naltsiine and the First nations shared an affinity for these caribou and the Royal Canadian Mounted Police who left record of attending meeting in Tetlin and come to Nabesna up to 1932 recognized the fact that the Indians from this side of the border had their right to pursue those caribou into the Canadian side and vice versa (SCRSAC 2010:341).

1 The transcript reads "…they were the Naltsiine, the Taltsiine out of Northway." Wilson Justin (pers. comm. 2011) notes that this is either a transcription error or he misspoke. The reference to the Taltsiine should be deleted.



MAP 2. Chisana caribou range. (Source: Simon and Brown 2010).

A year later, again at the Southcentral Council meeting, Justin added the following information:

> …I spoke at Tok last fall on the medicine people's caribou, commonly referred to as Chisana Herd and I spoke about how that the Chisana Herd originated. It was actually a gift to the Naltsiine people from eastern or east Canadian Indians to end the medicine man wars back in the 1800s. And I just reviewed the minutes not so long ago, there was nothing in the minutes about that. And I reiterate, I am the legal representative of the Cheesh'Na. My words were not brought into the minutes of that meeting and that's really an issue or concern and a problem, both in a—what you would call a Federal sense, ANILCA sense and a participation sense. I meant my words and that story to be remembered as a legal basis for access to those caribou by Cheesh'Na, but it didn't even make it into the minutes (SCRSAC 2011:39–40).

Other people in Chistochina have ties to the community of Chisana. Gilliam Joe, grandson of Chisana Joe, was born in Chisana and left the village when he was two or three years old. Reflecting on the technological changes in his lifetime, he noted that "I left [Chisana] by dog team and returned by airplane." Joe currently resides in Chistochina. As a young man, Gilliam Joe worked as a hunting guide based out of Chisana. He guided in the area between 1964 and 1984, and since that time has frequently returned to Chisana. Over two decades, Joe guided hunting parties into the mountains around Chisana. These parties hunted caribou, among other animals (Joe 2011, pers. comm.). Joe worked for a variety of outfitters, including those run by Bud Konkle and Terry Overly (Overly continues to reside in Chisana). Joe also taught other guides the craft. For example, he taught Deb Overly, who lived in Chisana and was a Chisana caribou guide for many years, and currently resides in Tok (Joe 2011, pers. comm.).

Effect of the Proposal

If this proposal is adopted, the Federal Subsistence Board would recognize the customary and traditional uses of residents of Chistochina to harvest caribou in Unit 12. Additionally, if Proposal WP12-66, which would establish a hunt for Chisana Caribou Herd, is adopted by the Federal Subsistence Board, then Chistochina residents could harvest Chisana caribou, as well as other caribou herds in Unit 12 under Federal subsistence regulations. There are no anticipated biological effects of the proposal. Any conservation issues would be addressed by regulations managing seasons and harvest limits.

OSM PRELIMINARY CONCLUSION

Support Proposal WP12-68.

Justification

The documentary record indicates that Chistochina residents exhibit customary and traditional practices associated with hunting caribou Unit 12. Historically, members of the Upper-Chisana-Upper Nabesna band occupied the north area of the Wrangell-St. Elias Mountains, hunted caribou in the Nutzotin and Mentasta Mountains, and hunted and trapped in the basins of several rivers, including the White, Nabesna, and Chisana Rivers. With a shift to village life in the late-nineteenth and early twentieth centuries, Upper Chisana-Upper Nabesna band members moved to Northway, Mentasta, Chistochina and Tetlin (Guédon 1974), where their descendants continue to live. Of these communities, only Chistochina lacks a customary and traditional use determination for caribou in Unit 12.

LITERATURE CITED

Ahtna, Inc. 1988. Report of investigation: over-the-horizon backscatter radar system at Gulkana, Alaska, oral/ethnohistoric cultural studies program. Report written by Ahtna, Inc., and produced by the United States Air Force.

Case, M. F. 1986. Wild Resource Use in Northway, Alaska. Alaska Depart of Fish and Game, Div. of Subsistence Technical Paper No. 132. Juneau, Alaska.

De Laguna, F. and R. McKennan, 1981. Ahtna. In *Handbook of North American Indians*, vol. 6, Subarctic. J. Hewlm, ed. Washington, D.C.: Smithsonian Institution.

DCRA, 2011. Alaska Division of Community and Regional Affairs. Htpp://www.commerce.state.ak.us/dea. Juneau, AK.

FSB. 1996. Transcript of Federal Subsistence Board meeting. May 2, 1996. Volume IV. Anchorage, AK.

FSB. 1997. Transcript of Federal Subsistence Board meeting. April 7, 1997. Volume I. Anchorage, AK.

Grinev, A.V. 1993. On the Banks of the Copper River: The Ahtna Indians and the Russians, 1783–1867. *Arctic Anthropology* 30:54–66.

Guédon Marie-Francoise, 1974. People of Tetlin, Why are you Singing? National Museum of Man, Mercury Series, Paper No. 9.

Haynes, T. L. and W. E. Simeone, 2007. Upper Tanana ethnographic overview and assessment, Wrangell St. Elias National Park and Preserve. Alaska Depart of Fish and Game, Div. of Subsistence Technical Paper No. 325. Juneau, Alaska.

Joe, Gulliam, 2011. Resident of Chistochina. Personal communication: in-person and phone.

Justin, Wilson, 2011. Cheesh'na Tribal Administrator. Personal communication: in-person and phone.

Kari, J. Ed. 1986. *Tatl'awnt'aenn Nenn'" The Headwaters People's Country, narratives of the Upper Ahtna Athabaskans*. Alaska Native Language Center. Fairbanks, Alaska.

Kari, J. 1990. *Ahtna Athabaskan Dictionary*. Alaska Native language Center, Fairbanks, Alaska.

Ketz. J. A. 1983. Paxson Lake: Two Nineteenth Century Ahtna Sites in the Copper River Basin, Alaska. Occasional Paper No. 33. Cooperative Park Studies Unit, University of Alaska, Fairbanks.

McKennan, R. 1959. *The Upper Tanana Indians*. New Haven, Conn.: Yale University Press.

Mishler, C. and W. E. Simeone. 2006. *Tanana and Chandalar*. Fairbanks. Alaska: University of Alaska Press.

Overly, Deb, 2011. Personal communication: in-person.

Reckord, H. 1983a. That's the Way We Live: Subsistence in the Wrangell-St. Elias National Park and Preserve. Anthropology and Historic Preservation Cooperative Park Studies Unit, Occasional Paper No 34.

Reckord, H. 1983b. Where Raven Stood: Cultural Resources of the Ahtna Region. Anthropology and Historic Preservation Cooperative Park Studies Unit, Occasional Paper No 35.

Rohn, O. 1900. A Reconnaissance of the Chitina and Skolai Mountains, Alaska. In, U.S. Geological Survey, 21st Annual Report, 1899–1900, pt. 2, pp. 393–440. Washington, D.C.

Simeone, W. E. 2006. Some Ethnographic and Historical Information on the Use of Large Land Mammals in the Cooper River Basin. Resource Report, NPS/AR/CRR-2006-56. Wrangell-St. Elias National Park and Preserve.

Simon, J.J., and C. Brown, 2010. Customary and Traditional Worksheet: Chisana Caribou Herd, GMU 12, Upper Tanana-White River Area. Special Publication No. BOG 2010-03. ADFG, Div. of Subsistence. Fairbanks, AK.

Skoog, Ronald. 1968. Ecology of the Caribou (*Rangifer tarandus garnti*) in Alaska. Ph.D. dissertation. University of California at Berkeley. University Microfilms.

SCRAC. 2010. Transcripts of the Southcentral Alaska Subsistence Regional Advisory Council meeting, May 11–12, 2010, in Anchorage, Alaska. Office of Subsistence Management, FWS. Anchorage, AK.

SCRAC. 2011. Transcripts of the Southcentral Alaska Subsistence Regional Advisory Council meeting, March 10–11, 2011, in Anchorage, Alaska. Office of Subsistence Management, FWS. Anchorage, AK.

U.S. Census 2000. State and County Quick Facts. htpp://quickfacts.census.gov.

Wrangell, Ferdinand von. 1839. *Statistische und Ethnographische Nachrichten uber die Russischen Besitzungen an der Nordwestkuste von Amerika*, ed. By K. E. von Baer, St. Petersberg. Reprinted in translation in 1980 as *Russian America: Statistical and Ethnographic Information*. Kingston, Ontario: Limestone Press.

WP12-69 Executive Summary	
General Description	Proposal WP12-69 requests a change in the customary and traditional use determination in Unit 25 remainder from "all rural residents," to "residents of Unit 25." *Submitted by the Eastern Interior Alaska Subsistence Regional Advisory Council*
Proposed Regulation	**Customary and Traditional Use Determination—Caribou** **Unit 25D** *Rural residents of Units 20F, 25D, and Manley.* **Unit 25, remainder.** ~~*All rural residents.*~~***Residents of Unit 25***
OSM Preliminary Conclusion	**Support** Proposal WP612-69 **with modification**. The modification would be to include residents of Unit 24A in the customary and traditional use determination for caribou in Unit 25 remainder. The modified regulation should read: **Customary and Traditional Use Determination—Caribou** **Unit 25D** *Rural residents of Units 20F, 25D, and Manley.* **Unit 25, remainder.** ~~*All rural residents.*~~***Residents of Unit 25 and 24A.***
Western Interior Regional Council Recommendation	
Eastern Interior Regional Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	**Support**
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP12-69

ISSUES

Proposal WP12-69, submitted by the Eastern Interior Alaska Subsistence Regional Advisory Council, requests a change in the customary and traditional use determination in Unit 25 remainder from "all rural residents," to "residents of Unit 25."

DISCUSSION

The proponent expresses concern that as the Fortymile Caribou herd expands, it may draw Federally qualified subsistence users from outside Unit 25. The proponent makes the following observations in support of the proposed regulatory change:

> Currently the 40 Mile Caribou herd population is increasing; as the population grows the herd is expanding its range into Unit 25C (the White Mountains National Recreation Area)… Recently, there have been concerns expressed that as the herds range expands there is a potential for increased Federal harvest in Unit 25C. The current C&T in Unit 25C allows all Federally qualified subsistence users in Alaska to harvest 1 caribou by a joint Federal/State registration permit. Because this area is road accessible and is a relatively easy hunt, the herd's expansion may draw additional Federally qualified subsistence users from outside of the unit.

Note that the proponent's concern is focused on the Fortymile Caribou Herd in Unit 25C, but the proposal speaks to Unit 25 remainder, i.e. Unit 25A, B and C. The proponent states that "the C&T should be narrowed to the Federally Qualified Subsistence users in Unit 25 or as determined by staff analysis."

Existing Federal Regulation

Customary and Traditional Use Determination—Caribou

Unit 25D

Rural residents of Units 20F, 25D, and Manley.

Unit 25, remainder.

All rural residents.

Proposed Federal Regulation

Customary and Traditional Use Determination—Caribou

Unit 25D

Rural residents of Units 20F, 25D, and Manley.

Unit 25, remainder.

~~*All rural residents*~~***.Residents of Unit 25***

Extent of Federal Public Lands

The Arctic National Wildlife Refuge comprises approximately 74% of Unit 25A; a small portion (2%) is managed by the Bureau of Land Management.

Approximately 64% of Unit 25B is comprised of Federal public lands, including the U.S. Fish and Wildlife Service (36%), comprised of the Yukon Flats National Wildlife Refuge, the Arctic National Wildlife Refuge, the National Park Service (8%), comprised of the Yukon-Charley Rivers National Preserve, and BLM lands (20%).

Approximately 74% of Unit 25C is comprised of Federal public lands, including BLM managed lands (64%) comprised of the White Mountains National Recreation Area, the Steese National Conservation Area, NPS managed lands (9%), comprised of Yukon-Charley Rivers National Preserve, and less than 1% of land managed by the FWS (**Unit 25 Map**).

Regulatory History

In 1998, the Federal Subsistence Board adopted a customary and traditional use determination for caribou in Unit 25D for rural residents of Units 20F, 25D, and Manley. For the remainder of Unit 25, the Board made no specific customary and traditional use determination, which meant that all Federally qualified users were eligible to harvest caribou in Unit 25, remainder (63 FR June 29, 1998).

Community Characteristics and Subsistence History

The communities in Unit 25D include Stevens Village, Beaver, Birch Creek, Fort Yukon, Chalkyitsik, Venetie, and Circle; Arctic Village is in Unit 25A; and Central (including Circle Hot Springs) is in Unit 25C. There are no communities in Unit 25B. The estimated populations 1970-2010 for these communities, and Coldfoot and Wiseman, are shown in **Table 1**.

The following community information is derived from the Alaska Community Database Community Information Summaries (ADCCED 2011), and from the *Proposed Land Exchange Yukon Flats National Wildlife Refuge Final Environmental Impact Statement* (USFWS 2010).

Arctic Village

Arctic Village is on the east fork of the Chandalar River, 100 miles north of Fort Yukon and 290 miles north of Fairbanks. Until the 1950s, the Neets'aii Gwichin ("residents of the north side") lived a nomadic lifestyle. They traditionally used seasonal camps and semi-permanent settlements, such as Arctic Village, Christian, Venetie, and Sheenjak, in pursuit of fish and game. With the introduction of firearms in the early 1900s, family groups began to gather more permanently at several locations, and no longer dispersed into small groups to hunt caribou. A federally-recognized tribe is located in the community -- the Native Village of Venetie Tribal Government. The Neets'aii Gwich'in of Arctic Village lead a subsistence-based lifestyle (ADCCED 2011).

Between 1993 and 1997, the total subsistence harvest for residents of Arctic Village was 10,000 to 21,000 pounds; caribou and moose represented more than 90% of the harvest by weight for most years. Arctic Village harvest areas, based on Caulfield (1983), are shown in **Figure 1**. This figure represents lifetime subsistence harvest areas based on 11 interviews in 1980 (USFWS 2010:3-113ff.).

Table 1. Community Population Estimates (ADCCED 2011 and US Census 2000).

COMMUNITY	POPULATION				
	2010	2000	1990	1980	1970
Arctic Village	152	152	96	111	85
Beaver	84	84	103	66	101
Birch Creek	33	28	42	32	n/a
Coldfoot	10	13	0	0	0
Central	96	134	52	36	26
Chalkyitsik	69	83	90	100	130
Circle	104	100	73	81	54
Fort Yukon	583	595	580	619	448
Stevens Village	78	87	102	96	74
Venetie	166	202	182	132	112
Wiseman	14	21	33	8	0

Beaver

Beaver is located on the north bank of the Yukon River, approximately 60 air miles southwest of Fort Yukon and 110 miles north of Fairbanks. It lies in the Yukon Flats National Wildlife Refuge. Gold discoveries in the Chandalar region in 1907 led to the founding of Beaver. It was established as the Yukon River terminus for miners heading north to the gold fields. A federally-recognized tribe is located in the community -- the Beaver Village. The population of Beaver is predominantly mixed Gwitchin/Koyukuk Athabascan and Inupiat Eskimo. Subsistence is an important source of food items (ADCCED 2011).

Beaver harvest areas, based on Sumida (1989), are shown in **Figure 2**. This figure represents lifetime subsistence harvest areas based on 15 interviews in 1985-86, and covers the years between 1930 and 1986 (USFWS 2010: 3-114 ff.).

Birch Creek

The first written reference to a settlement in the Birch Creek area was in 1862 by a Fort Yukon clergyman who visited a camp established to provide fish for Hudson's Bay Company in Ft. Yukon. Some anthropologists believe that this settlement was annihilated by scarlet fever in the 1880s, but there are ethnographic accounts of the use of this area from 1867 onwards. Birch Creek Jimmy was the founder of Birch Creek and was great chief among the chiefs in his days. He built a cabin in 1898 at the site of the Hudson Bay fish camp. Several years later, he was joined by other extended family members. Around

Figure 1

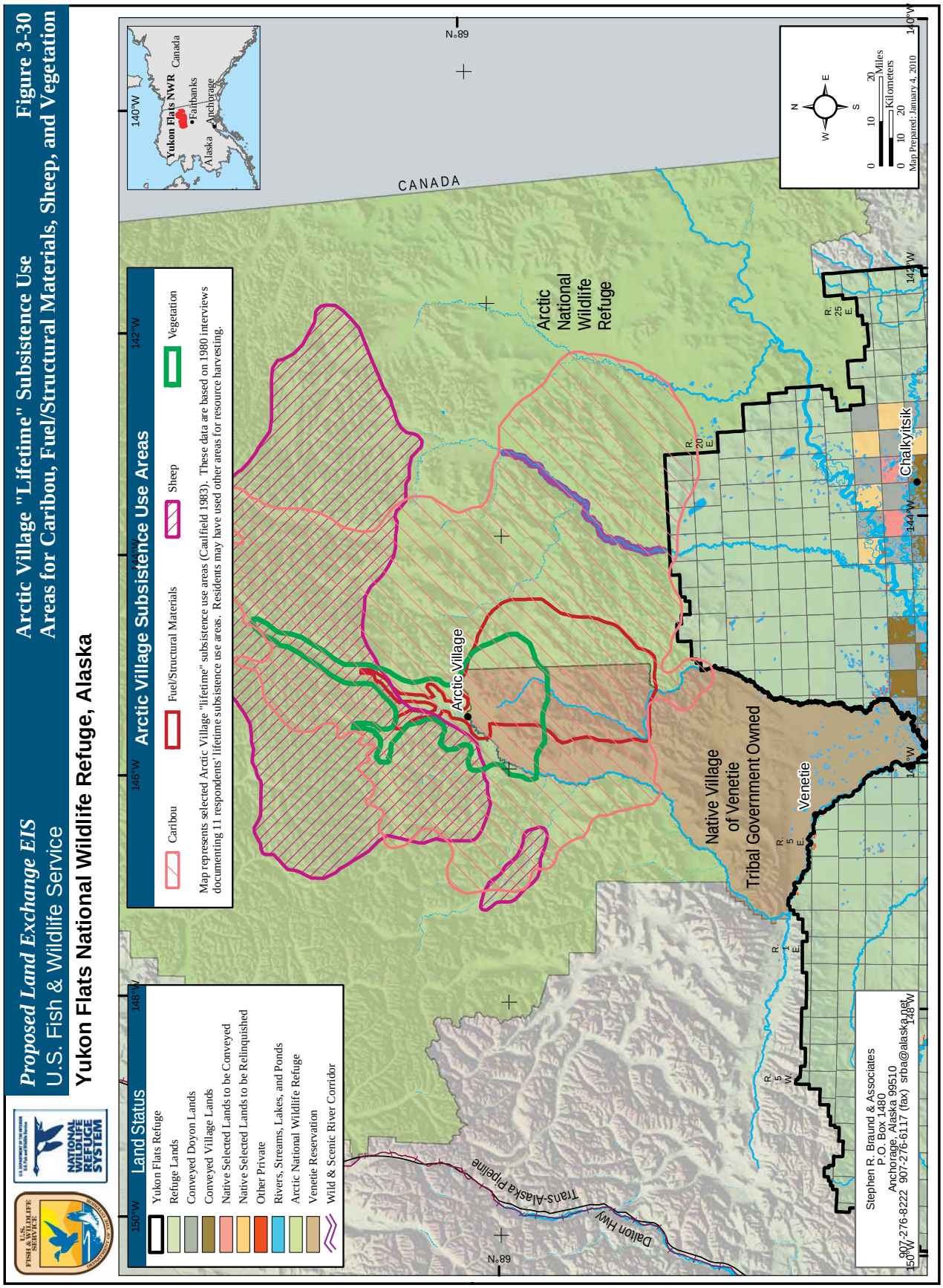
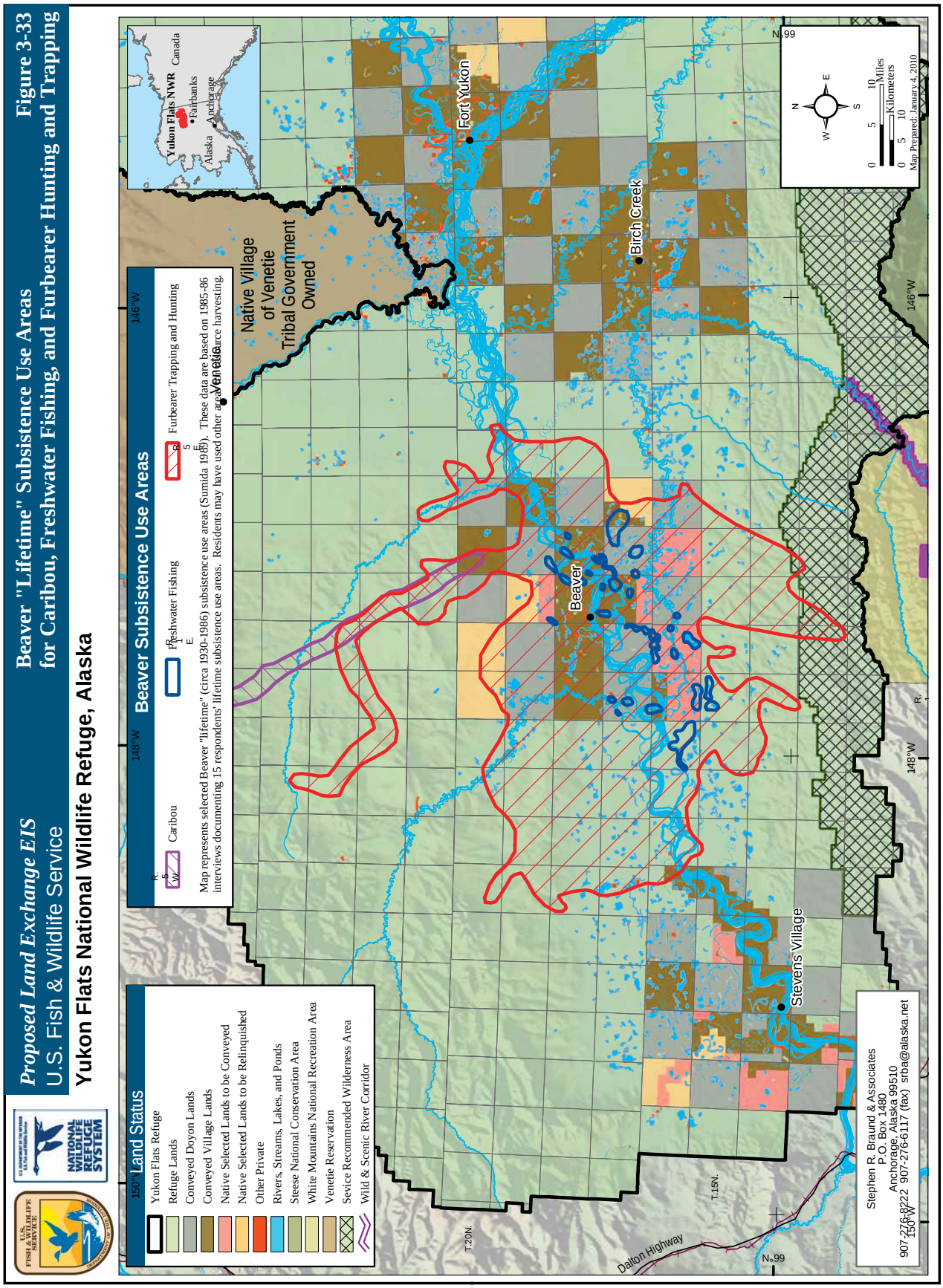

Proposed Land Exchange EIS
U.S. Fish & Wildlife Service
Yukon Flats National Wildlife Refuge, Alaska
Arctic Village "Lifetime" Subsistence Use
Areas for Caribou, Fuel/Structural Materials, Sheep, and Vegetation
Figure 3-30
Land Status
Yukon Flats Refuge
Refuge Lands
Conveyed Doyon Lands
Conveyed Village Lands
Native Selected Lands to be Conveyed
Native Selected Lands to be Relinquished
Other Private
Rivers, Streams, Lakes, and Ponds
Arctic National Wildlife Refuge
Venetie Reservation
Wild & Scenic River Corridor
Arctic Village Subsistence Use Areas
Caribou
Fuel/Structural Materials
Sheep
Vegetation
Map represents selected Arctic Village "lifetime" subsistence use areas (Caulfield 1983). These data are based on 1980 interviews documenting 11 respondents' lifetime subsistence use areas. Residents may have used other areas for resource harvesting.
CANADA
Arctic Village
Arctic National Wildlife Refuge
Native Village of Venetie Tribal Government Owned
Venetie
Chalkyitsik
Dalton Hwy
Trans-Alaska Pipeline
Yukon Flats NWR
Canada
Fairbanks
Alaska
Anchorage
Map Prepared: January 4, 2010
Stephen R. Braund & Associates
P.O. Box 1480
Anchorage, Alaska 99510
907-276-8222 907-276-6117 (fax) srba@alaskanet.com

Figure 2


Proposed Land Exchange EIS
U.S. Fish & Wildlife Service
Yukon Flats National Wildlife Refuge, Alaska
Beaver "Lifetime" Subsistence Use Areas
for Caribou, Freshwater Fishing, and Furbearer Hunting and Trapping
Figure 3-33
Land Status
Yukon Flats Refuge
Refuge Lands
Conveyed Doyon Lands
Conveyed Village Lands
Native Selected Lands to be Conveyed
Native Selected Lands to be Relinquished
Other Private
Rivers, Streams, Lakes, and Ponds
Steese National Conservation Area
White Mountains National Recreation Area
Venetie Reservation
Sevice Recommended Wilderness Area
Wild & Scenic River Corridor
Beaver Subsistence Use Areas
Caribou
Freshwater Fishing
Furbearer Trapping and Hunting
Map represents selected Beaver "lifetime" (circa 1930-1986) subsistence use areas (Sumida 1985). These data are based on 1985-86 interviews documenting 15 respondents' lifetime subsistence use areas. Residents may have used other areas for resource harvesting.
Native Village of Venetie Tribal Government Owned
Yukon Flats NWR
Fairbanks
Anchorage
Alaska
Canada
Fort Yukon
Birch Creek
Beaver
Stevens Village
Dalton Highway
T.20N.
T.15N.
N.99
150°W
148°W
146°W
Miles
Kilometers
Map Prepared: January 4, 2010
Stephen R. Braund & Associates
P.O. Box 1480
Anchorage, Alaska 99510
907-276-8222 907-276-6117 (fax) srba@alaska.net

1916, the group moved three miles upstream to the site of the present village. It was used as a seasonal base for harvest activities until the early 1950s, when the establishment of a school encouraged village residents to adopt a less nomadic way of life. The first airstrip was constructed in 1973. The school was closed in 1999 due to insufficient students. A federally-recognized tribe is located in the community -- the Birch Creek Tribe; Dendu Gwich'in Tribal Council. Local residents are Dendu Gwich'in Athabascans and are active in subsistence practices (ACDR 2011).

Subsistence harvest data on Birch Creek do not include caribou. **Figure 3** represents a general pattern of subsistence use, based on Stephen R. Braund & Associates (2007). The figure covers the years between 1997 and 2006, based on 17 interviews in 2007 (USFWS 2010: 3-122 ff.).

Central

Central is located on the Steese Highway about 125 miles northeast of Fairbanks and 28 miles southwest of Circle. Circle Hot Springs is located nearby. After the discovery of gold in the Circle Mining District in the 1890s, a centrally-located roadhouse was required between Circle, a supply point on the Yukon, and the mining operations at Mammoth, Mastodon, Preacher, and Birch Creeks. Central House, originally built around 1894, was located at the supply trail's crossing of Crooked Creek. A post office was established in 1925. In 1927, the road link to Fairbanks was completed. Mining continued until the beginning of World War II. After the war, a few miners returned to Central, but mining declined through the 1950s and 60s. Activity increased again in the mid-1970s with the rise in gold prices (ADCCED 2011).

Limited recent use area data are available for Central. **Figure 4** represents subsistence areas for Central, Circle, and Eagle (USFWS 2010:3-123 ff.).

Chalkyitsik

Chalkyitsik is located on the Black River about 50 miles east of Fort Yukon. Chalkyitsik means "fish hooking place" and has traditionally been an important seasonal fishing site for the Gwich'in. Archaeological excavations in the area reveal use and occupancy of the region as early as 10,000 BC. Village elders remember a highly nomadic way of life, living at the headwaters of the Black River from autumn to spring and then floating downriver to fish in summer. By 1969, there were 26 houses, a store, two churches, and a community hall in Chalkyitsik. A Federally-recognized tribe is located in the community -- the Chalkyitsik Village. Chalkyitsik is a traditional Gwich'in Athabascan village, with a subsistence lifestyle (ADCCED 2011).

There are limited caribou subsistence harvest use area data available for Chalkyitsik. **Figure 5** represents lifetime subsistence harvest areas based on 8 interviews in 1981 (Caulfield 1983; USFWS 2010:3-128 ff.).

Circle

Circle is located on the south bank of the Yukon River at the edge of the Yukon Flats, 160 miles northeast of Fairbanks. It is at the eastern end of the Steese Highway. Circle (also known as Circle City) was established in 1893 as a supply point for goods shipped up the Yukon River and then overland to the gold mining camps. Early miners believed the town was located on the Arctic Circle, and named it Circle. The town was virtually emptied after gold discoveries in the Klondike (1897) and Nome (1899). A federally-recognized tribe is located in the community -- the Circle Native Community. The population of Circle is predominantly Athabascan, and there are several non-Native families.

Figure 3

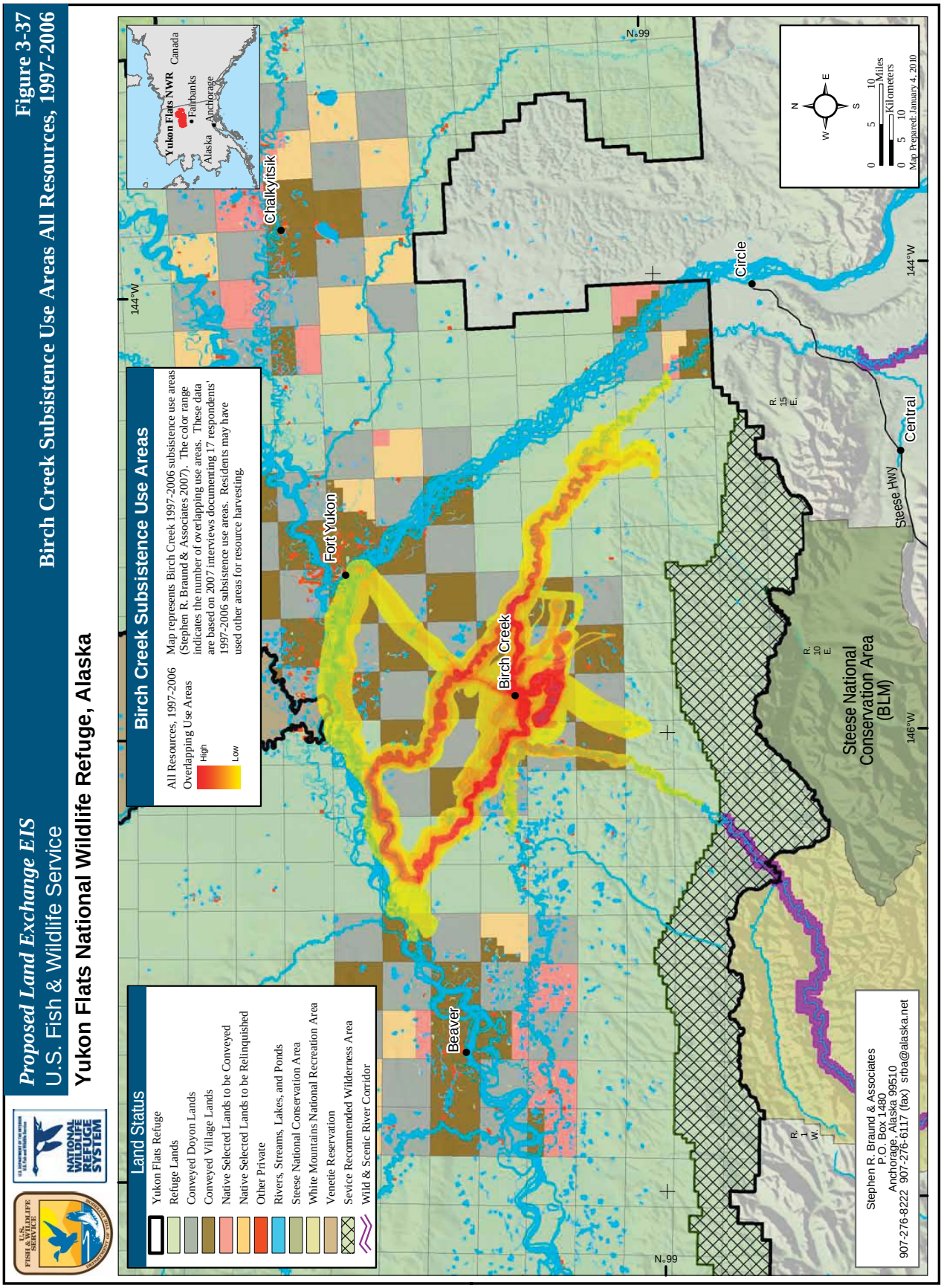

Proposed Land Exchange EIS
U.S. Fish & Wildlife Service
Yukon Flats National Wildlife Refuge, Alaska
Figure 3-37
Birch Creek Subsistence Use Areas All Resources, 1997-2006
Land Status
Yukon Flats Refuge
Refuge Lands
Conveyed Doyon Lands
Conveyed Village Lands
Native Selected Lands to be Conveyed
Native Selected Lands to be Relinquished
Other Private
Rivers, Streams, Lakes, and Ponds
Steese National Conservation Area
White Mountains National Recreation Area
Venetie Reservation
Sevice Recommended Wilderness Area
Wild & Scenic River Corridor
Birch Creek Subsistence Use Areas
All Resources, 1997-2006 Overlapping Use Areas
High
Low
Map represents Birch Creek 1997-2006 subsistence use areas (Stephen R. Braund & Associates 2007). The color range indicates the number of overlapping use areas. These data are based on 2007 interviews documenting 17 respondents' 1997-2006 subsistence use areas. Residents may have used other areas for resource harvesting.
Yukon Flats NWR
Canada
Fairbanks
Anchorage
Alaska
Chalkyitsik
Fort Yukon
Birch Creek
Beaver
Circle
Central
Steese Hwy
Steese National Conservation Area (BLM)
144°W
146°W
N.99
R. 1 W.
R. 10 E.
R. 15 E.
N
W
E
S
0 5 10 Miles
0 5 10 Kilometers
Map Prepared: January 4, 2010
Stephen R. Braund & Associates
P.O. Box 1480
Anchorage, Alaska 99510
907-276-8222 907-276-6117 (fax) srba@alaska.net

Figure 4

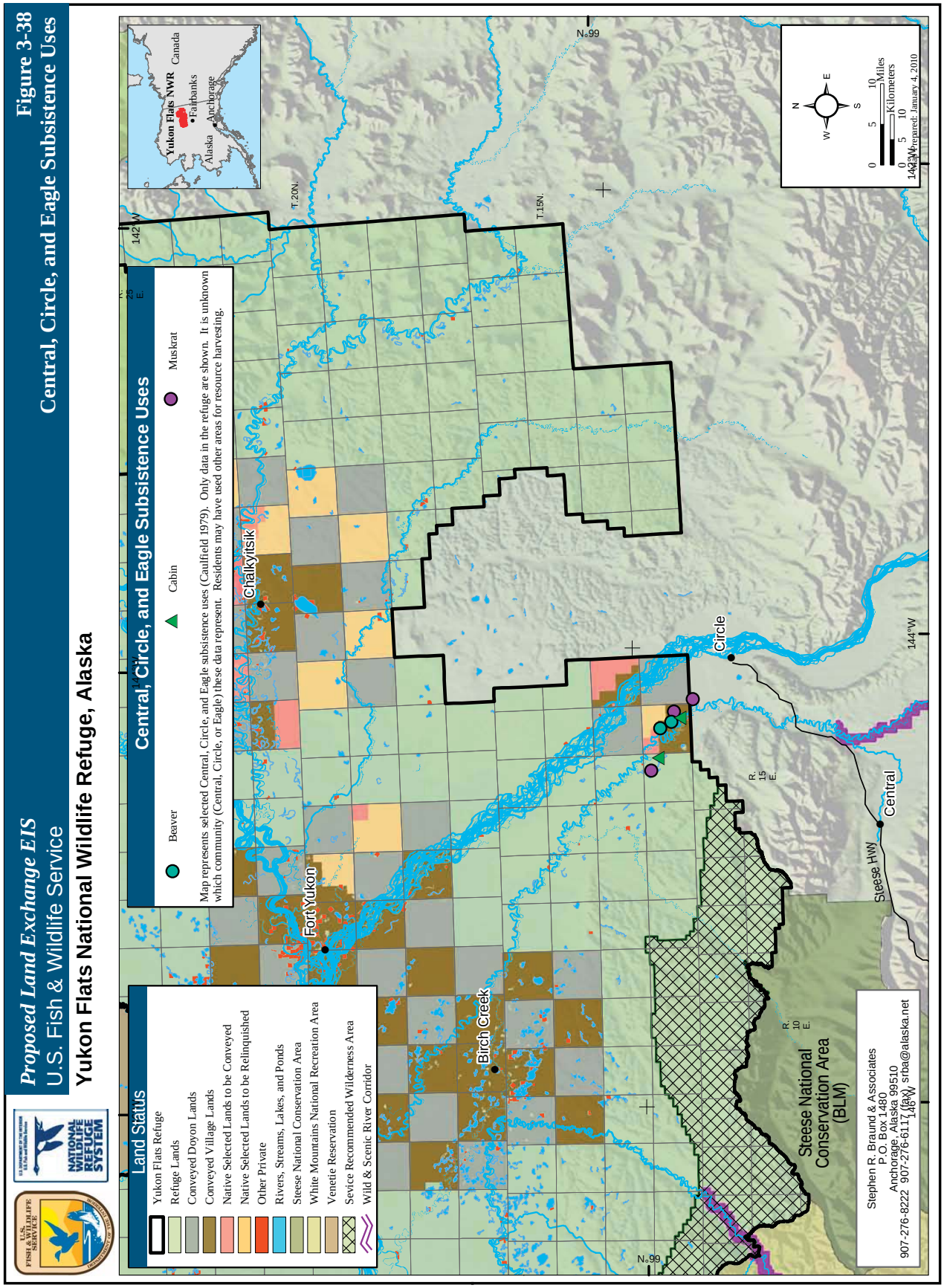
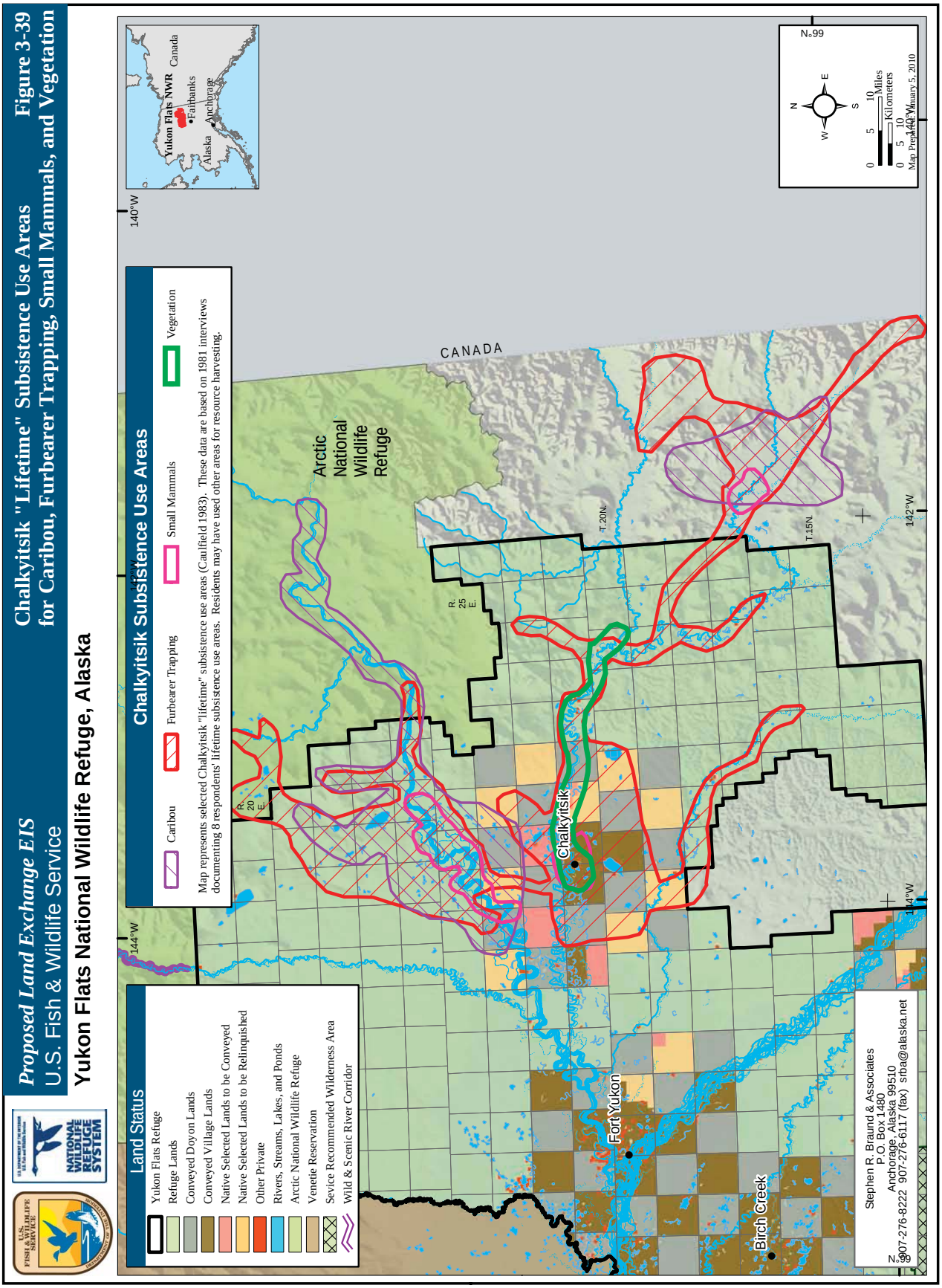

Proposed Land Exchange EIS
U.S. Fish & Wildlife Service
Yukon Flats National Wildlife Refuge, Alaska
Figure 3-38
Central, Circle, and Eagle Subsistence Uses
Land Status
Yukon Flats Refuge
Refuge Lands
Conveyed Doyon Lands
Conveyed Village Lands
Native Selected Lands to be Conveyed
Native Selected Lands to be Relinquished
Other Private
Rivers, Streams, Lakes, and Ponds
Steese National Conservation Area
White Mountains National Recreation Area
Venetie Reservation
Sevice Recommended Wilderness Area
Wild & Scenic River Corridor
Central, Circle, and Eagle Subsistence Uses
Beaver
Cabin
Muskrat
Map represents selected Central, Circle, and Eagle subsistence uses (Caulfield 1979). Only data in the refuge are shown. It is unknown which community (Central, Circle, or Eagle) these data represent. Residents may have used other areas for resource harvesting.
Yukon Flats NWR
Canada
Fairbanks
Alaska
Anchorage
Map Prepared: January 4, 2010
Chalkyitsik
Fort Yukon
Birch Creek
Circle
Central
Steese Hwy
Steese National Conservation Area (BLM)
T.20N.
T.15N.
N.99
R. 25 E.
R. 15 E.
R. 10 E.
142°W
144°W
Miles
Kilometers
Stephen R. Braund & Associates
P.O. Box 1480
Anchorage, Alaska 99510
907-276-8222 907-276-6117 (fax) srba@alaska.net

Figure 5


Proposed Land Exchange EIS
U.S. Fish & Wildlife Service
Yukon Flats National Wildlife Refuge, Alaska
Chalkyitsik "Lifetime" Subsistence Use Areas
for Caribou, Furbearer Trapping, Small Mammals, and Vegetation
Figure 3-39
Land Status
Yukon Flats Refuge
Refuge Lands
Conveyed Doyon Lands
Conveyed Village Lands
Native Selected Lands to be Conveyed
Native Selected Lands to be Relinquished
Other Private
Rivers, Streams, Lakes, and Ponds
Arctic National Wildlife Refuge
Venetie Reservation
Sevice Recommended Wilderness Area
Wild & Scenic River Corridor
Chalkyitsik Subsistence Use Areas
Caribou
Furbearer Trapping
Small Mammals
Vegetation
Map represents selected Chalkyitsik "lifetime" subsistence use areas (Caulfield 1983). These data are based on 1981 interviews documenting 8 respondents' lifetime subsistence use areas. Residents may have used other areas for resource harvesting.
Yukon Flats NWR
Fairbanks
Anchorage
Alaska
Canada
CANADA
Arctic National Wildlife Refuge
Chalkyitsik
Fort Yukon
Birch Creek
R. 20 E.
R. 25 E.
T. 20N.
T. 15N.
144°W
142°W
140°W
N. 99
Miles
Kilometers
Map Prepared January 5, 2010
Stephen R. Braund & Associates
P. O. Box 1480
Anchorage, Alaska 99510
907-276-8222 907-276-6117 (fax) srba@alaska.net

Limited caribou subsistence use area data are available for Circle. **Figure 4** represents subsistence areas for Central, Circle, and Eagle (USFWS 2010:3-123 ff.).

Fort Yukon

Fort Yukon is located at the confluence of the Yukon and Porcupine Rivers, about 145 air miles northeast of Fairbanks. Fort Yukon was founded in 1847 by Alexander Murray as a Canadian outpost in Russian territory. It became an important trade center for the Gwich'in Indians, who inhabited the vast lowlands of the Yukon Flats and River valleys. During the 1950s, a White Alice Communications System and an Air Force station were established. Fort Yukon incorporated as a city in 1959. A federally-recognized tribe is located in the community -- the Native Village of Fort Yukon; Canyon Village Traditional Council (not recognized). Most Fort Yukon residents are descendants of the Yukon Flats, Chandalar River, Birch Creek, Black River, and Porcupine River Gwich'in Athabascan tribes. Subsistence is an important component of the local culture (ADCCED 2011).

Fort Yukon subsistence harvest areas, based on Caulfield (1983) and Sumida and Anderson (1990), are shown in **Figure 6**. This figure represents lifetime subsistence harvest areas based on 10 interviews in 1981 and 26 interviews in 1988 (USFWS 2010: 3-114 ff.).

Stevens Village

Stevens Village is located on the north bank of the Yukon River, 17 miles upstream of the Dalton Highway bridge crossing and 90 air miles northwest of Fairbanks. The original settlement, called Dinyea (meaning "mouth of the canyon"), was founded by three Athabascan brothers from the Koyukon region: Old Jacob, Gochonayeeya, and Old Steven. The village was named for Old Steven when he was elected chief in 1902. A post office began operations in 1936, and scheduled air service was initiated in 1939. A federally-recognized tribe is located in the community -- the Native Village of Stevens. The Native population is predominantly Kutchin Natives, who depend upon subsistence (ADCCED 2011).

Stevens Village harvest areas, based on Sumida (1988), are shown in **Figure 7**. This figure represents subsistence harvest areas based on 24 interviews in 1984-1985, and covers the years between 1974 and 1984 (USFWS 2010: 3-135 ff.). Note that the map does not depict caribou harvest areas.

Venetie

Venetie is located on the north side of the Chandalar River, 45 miles northwest of Fort Yukon. Known to early explorers as Old Robert's Village or Chandalar Village, Venetie was founded in 1895 by a man named Old Robert, who chose Venetie because of its plentiful fish and game. During the 1950s and 60s, the use of seasonal camps declined, but the advent of the snowmachine enabled Venetie residents to renew use of areas which had traditionally been occupied seasonally. A federally-recognized tribe is located in the community -- the Village of Venetie; Native Village of Venetie Tribal Government (Arctic Village and Village of Venetie). Venetie is comprised largely of descendants of the Neets'ai Gwich'in and, to a lesser extent, the Gwichyaa and Dihaii Gwich'in (ADCCED 2011).

Between 1970 and 1982, caribou were important elements of harvest during some years—as much as 71% of the total harvest. In other years, residents of Venetie harvested no caribou. Venetie lifetime harvest areas, based on Caulfield (1983), are shown in **Figure 8**. This figure represents lifetime subsistence harvest areas based on 9 interviews in 1981 (USFWS 2010: 3-142 ff.).

Figure 6

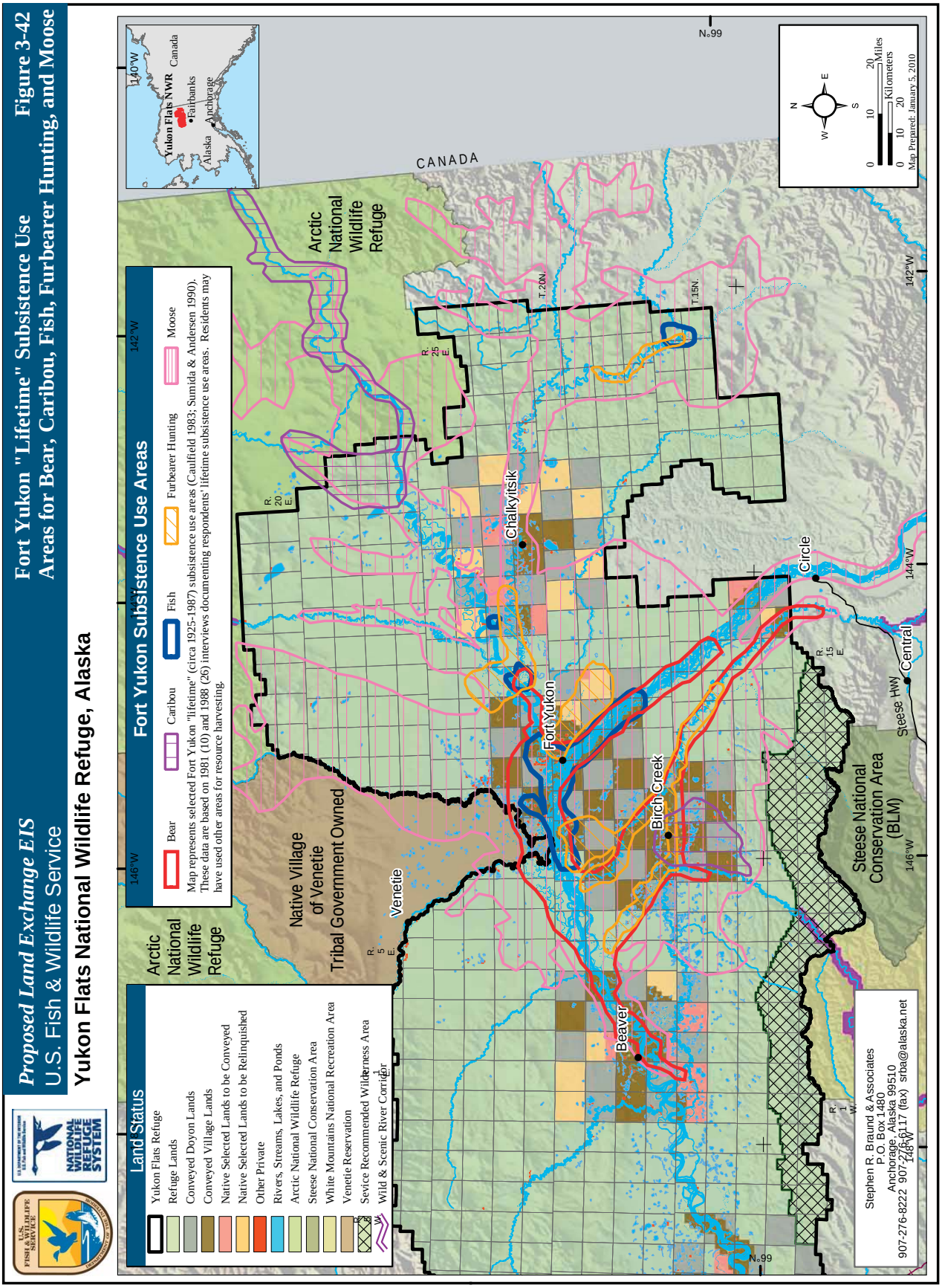

Proposed Land Exchange EIS
U.S. Fish & Wildlife Service
Yukon Flats National Wildlife Refuge, Alaska
Fort Yukon "Lifetime" Subsistence Use Areas for Bear, Caribou, Fish, Furbearer Hunting, and Moose
Figure 3-42
Land Status
Yukon Flats Refuge
Refuge Lands
Conveyed Doyon Lands
Conveyed Village Lands
Native Selected Lands to be Conveyed
Native Selected Lands to be Relinquished
Other Private
Rivers, Streams, Lakes, and Ponds
Arctic National Wildlife Refuge
Steese National Conservation Area
White Mountains National Recreation Area
Venetie Reservation
Sevice Recommended Wilderness Area
Wild & Scenic River Corridor
Fort Yukon Subsistence Use Areas
Bear
Caribou
Fish
Furbearer Hunting
Moose
Map represents selected Fort Yukon "lifetime" (circa 1925-1987) subsistence use areas (Caulfield 1983; Sumida & Andersen 1990). These data are based on 1981 (10) and 1988 (26) interviews documenting respondents' lifetime subsistence use areas. Residents may have used other areas for resource harvesting.
Arctic National Wildlife Refuge
Native Village of Venetie Tribal Government Owned
Steese National Conservation Area (BLM)
CANADA
Yukon Flats NWR
Fairbanks
Anchorage
Alaska
Canada
Venetie
Beaver
Birch Creek
Fort Yukon
Chalkyitsik
Circle
Central
Steese Hwy
146°W
142°W
144°W
140°W
N99
T.20N.
T.15N.
R. 5 E.
R. 20 E.
R. 25 E.
R. 15 E.
R. 1 W.
Map Prepared: January 5, 2010
Miles
Kilometers
Stephen R. Braund & Associates
P.O. Box 1480
Anchorage, Alaska 99510
907-276-8222 907-276-7817 (fax) srba@alaska.net

Figure 7

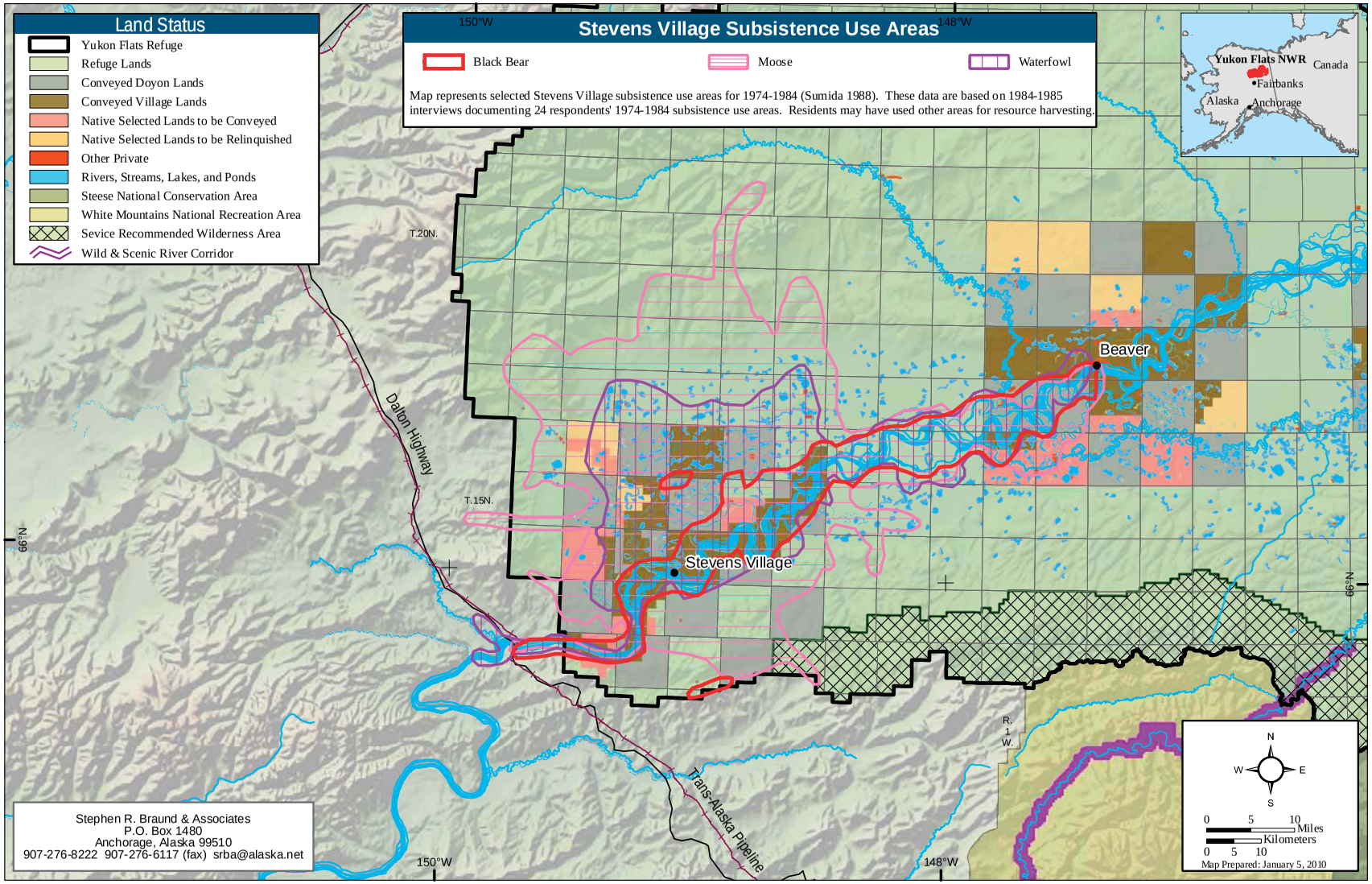
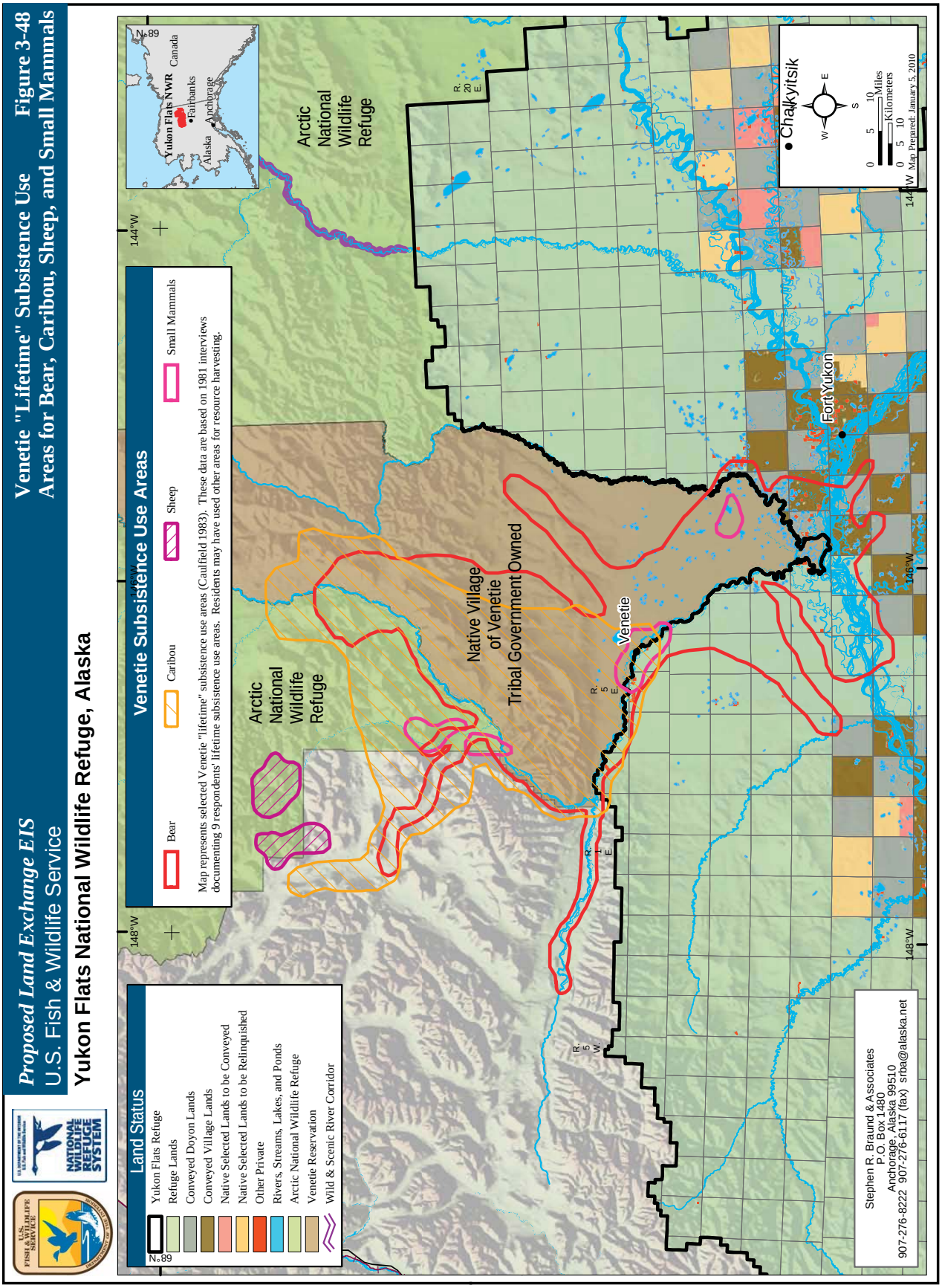

Proposed Land Exchange EIS
U.S. Fish & Wildlife Service
Yukon Flats National Wildlife Refuge, Alaska
Stevens Village Subsistence Use Areas for Black Bear, Moose, and Waterfowl, 1974-1984
Figure 3-45
Land Status
Yukon Flats Refuge
Refuge Lands
Conveyed Doyon Lands
Conveyed Village Lands
Native Selected Lands to be Conveyed
Native Selected Lands to be Relinquished
Other Private
Rivers, Streams, Lakes, and Ponds
Steese National Conservation Area
White Mountains National Recreation Area
Sevice Recommended Wilderness Area
Wild & Scenic River Corridor
Stevens Village Subsistence Use Areas
Black Bear
Moose
Waterfowl
Map represents selected Stevens Village subsistence use areas for 1974-1984 (Sumida 1988). These data are based on 1984-1985 interviews documenting 24 respondents' 1974-1984 subsistence use areas. Residents may have used other areas for resource harvesting.
Yukon Flats NWR
Canada
Fairbanks
Alaska
Anchorage
Beaver
Stevens Village
Dalton Highway
Trans-Alaska Pipeline
T.20N.
T.15N.
R. 1 W.
150°W
148°W
N.99
Miles
Kilometers
Map Prepared: January 5, 2010
Stephen R. Braund & Associates
P.O. Box 1480
Anchorage, Alaska 99510
907-276-8222 907-276-6117 (fax) srba@alaska.net

Figure 8


Proposed Land Exchange EIS
U.S. Fish & Wildlife Service
Yukon Flats National Wildlife Refuge, Alaska
Venetie "Lifetime" Subsistence Use
Areas for Bear, Caribou, Sheep, and Small Mammals
Figure 3-48
Land Status
Yukon Flats Refuge
Refuge Lands
Conveyed Doyon Lands
Conveyed Village Lands
Native Selected Lands to be Conveyed
Native Selected Lands to be Relinquished
Other Private
Rivers, Streams, Lakes, and Ponds
Arctic National Wildlife Refuge
Venetie Reservation
Wild & Scenic River Corridor
Venetie Subsistence Use Areas
Bear
Caribou
Sheep
Small Mammals
Map represents selected Venetie "lifetime" subsistence use areas (Caulfield 1983). These data are based on 1981 interviews documenting 9 respondents' lifetime subsistence use areas. Residents may have used other areas for resource harvesting.
Arctic National Wildlife Refuge
Native Village of Venetie Tribal Government Owned
Venetie
Fort Yukon
Chalkyitsik
Yukon Flats NWR
Fairbanks
Anchorage
Canada
Alaska
Map Prepared: January 5, 2010
Stephen R. Braund & Associates
P.O. Box 1480
Anchorage, Alaska 99510
907-276-8222 907-276-6117 (fax) srba@alaska.net

Coldfoot

Coldfoot is located at the mouth of Slate Creek on the east bank of the Middle Fork of the Koyukuk River at mile 175 of the Dalton Highway. The community received its name when gold prospectors ventured up the Koyukuk River in 1900, got "cold feet," and turned back (ADCCED 2011).

As shown in Table 1, between 2000 and 2009, Coldfoot residents hunted caribou in Unit 25. Over this time, three permits were issued to Coldfoot residents, resulting in two harvested caribou.

Wiseman

Wiseman is located on the Middle Fork of the Koyukuk River at its junction with Wiseman Creek about 13 miles north of Coldfoot. In the early 1900s, residents began to abandon Coldfoot in response to increasing mining activity around Wiseman; the town was established in 1907, fist as Wrights, then as Nolan, and finally as Wiseman in 1923. A territorial school operated from 1934 to 1941. The pipeline haul road, now called the Dalton Highway, passes near Wiseman (ADCCED 2011).

Scott (1993:60) notes that Wiseman residents harvest game in Units 24, 25 and 26, including caribou. In 1991, for example, Wiseman residents harvested 10 caribou; however, Scott does not indicate in which unit the caribou were harvested.

Eight Factors for Determining Customary and Traditional Uses

A community or area's customary and traditional use is generally exemplified through eight factors: (1) a long-term, consistent pattern of use, excluding interruptions beyond the control of the community or area; (2) a pattern of use recurring in specific seasons for many years; (3) a pattern of use consisting of methods and means of harvest which are characterized by efficiency and economy of effort and cost, conditioned by local characteristics; (4) the consistent harvest and use of fish or wildlife as related to past methods and means of taking: near, or reasonably accessible from the community or area; (5) a means of handling, preparing, preserving, and storing fish or wildlife which has been traditionally used by past generations, including consideration of alteration of past practices due to recent technological advances, where appropriate; (6) a pattern of use which includes the handing down of knowledge of fishing and hunting skills, values, and lore from generation to generation; (7) a pattern of use in which the harvest is shared or distributed within a definable community of persons; and (8) a pattern of use which relates to reliance upon a wide diversity of fish and wildlife resources of the area and which provides substantial cultural, economic, social, and nutritional elements to the community or area.

The Board makes customary and traditional use determinations based on a holistic application of these eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)). In addition, the Board takes into consideration the reports and recommendations of any appropriate Regional Advisory Council regarding customary and traditional use of subsistence resources (50 CFR 100.16(b) and 36 CFR 242.16(b)). The Board makes customary and traditional use determinations for the sole purpose of recognizing the pool of users who generally exhibit the eight factors. The Board does not use such determinations for resource management or restricting harvest. If a conservation concern exists for a particular population, the Board addresses that concern through the imposition of harvest limits or season restrictions rather than by limiting the customary and traditional use finding.

Specific information on each of the eight factors is not required because a community or area seeking a customary and traditional use determination only has to "generally exhibit" the eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)).

An analysis of customary and traditional caribou use for communities in 25D, communities in 20F and Manley, is found in the staff analysis for Proposal 102 (OSM 1998:118 ff.). That analysis concluded that historical and contemporary Gwich'in Athabascan territories encompassed Unit 25D, portions of which were also used by Koyukon Athabascan. Members of these Athabascan communities recognized and continue to recognize caribou as an important subsistence resource. Evidence of patterns of use includes caribou fences (Hosley 1981), traditions associated with hunting (Nelson 1973; Slobodin 1981), seasonal hunts (Case and Halpin 1990), traditional means of storage (Caulfield 1983), meat distribution through networks of kin (Caulfield 1983), and the incorporation of caribou into a larger pattern of resource use, which included sheep, moose, bear, waterfowl, small game, fish and other resources (Osgood 1936; Slobodin 1981). These patterns broadly persist to the present day, conditioned by current state and federal wildlife management regimes and other historical alterations.

Hosley (1981:534) indicated that the Gwich'in Athabascan of Unit 25D and the Koyukon of Unit 20F historically took caribou in the fall (October and November). Harvest data collected by the Council of Athabascan Tribal Governments (CATG) indicated that by the early 1990s the Gwich'in who had access to caribou harvested them as available. A definite season of intensive harvest was associated with game fences; a generalized pattern of harvest resulted from the adoption of firearms, dog teams, and snow machines for caribou hunting (Case and Halpin 1990). In the past, Gwich'in would travel considerable distances to harvest caribou. Throughout the 1980s, residents of 25D communities traveled up the Porcupine River to take caribou (Caulfield 1983:64).

The Gwich'in traditionally stored caribou by freezing or drying. The meat was prepared by boiling. Caribou heads were considered a delicacy and were baked, roasted, or boiled. Caribou stomachs were used as storage containers (Caulfield 1983:66).

Meat is frequently shared among members of hunting parties, among related households within communities, and between members of different communities. In the early 1980s, Caulfield noted the following:

> Sharing and exchange of locally-derived products continues in the region today. Certain communities, especially Arctic Village and Fort Yukon, serve as regional providers of localized resources. When caribou are available near Arctic Village, meat is shared not only with relatives in Venetie where kinship ties appear especially strong, but also with all other communities in the region. Small amounts of caribou meat may also be sent to the elderly confined in the hospital in Fairbanks or to university students living away from home (Caulfield 1983:203).

Residents in Unit 25 remainder exhibit similar historical and contemporary patterns of caribou use, which are not geographically limited to Unit 25D. Gwich'in Athabascan territory, for example, extended beyond Arctic Village to the north and into western Canada (Slobodin 1981). For Unit 25, remainder, the evidence of patterns of caribou use is the same as the evidence for Unit 25D. In general, when caribou migrations entered into areas proximate to human settlements, caribou were harvested. For example, Arctic Village residents harvested 92 caribou in 1993, 168 in 1994, 110 in 1995, 56 in 1996, and 11 in 1997. This pattern is in shown in **Table 2** for Arctic Village, Beaver, Central, Chalkyitsik, Circle, Fort Yukon, Stevens Village, and Venetie**.** Similar data for Birch Creek are unavailable.

Residents from a number of Federally qualified rural communities statewide have hunted caribou with a joint State/Federal permit in Unit 25. For example, residents from Kodiak, Barrow, and Sitka, among many other communities, have hunted caribou in Unit 25 between 2000 and 2009. Over this time, Kodiak residents received 24 permits and harvested 7 caribou; Barrow residents received 1 permit and harvested no caribou; Sitka residents received 12 permits and harvested 5 caribou. Rural resident caribou harvest

Table 2. Unit 25 caribou harvest data, 2000-2009 for all Federally qualified rural residents (USFWS 2011).

Res Community	Unit	Issued	State Res	Hunted	Kill	Days hunted	Success	CPUE
Skagway	1	1	1	1	0	6	0	0
Haines	1	13	13	9	2	76	22.2	2.6
Gustavus	1	5	5	2	1	4	50	25
Craig	2	6	6	6	0	49	0	0
Thorne Bay	2	2	2	1	0	7	0	0
Klawock	2	3	3	3	1	21	33.3	4.8
Wrangell	3	12	12	10	5	55	50	9.1
Petersburg	3	6	6	3	2	4	66.7	50
Elfin Cove	4	1	1	1	0	6	0	0
Tenakee Springs	4	8	8	7	2	28	28.6	7.1
Sitka	4	12	12	11	5	91	45.5	5.5
Yakutat	5	2	2	0	0	0		
Falls Bay	6	1	1	1	0	3	0	0
Cordova	6	14	14	12	5	51	41.7	9.8
Whittier	6	3	3	3	2	14	66.7	14.3
Chenega Bay	6	1	1	0	0	0		
Cooper Landing	7	6	6	3	2	23	66.7	8.7
Hope	7	2	2	0	0	0		
Kenny Lake	13	2	2	1	0	1	0	0
Copper Center	13	10	10	9	3	54	33.3	5.6
Glennallen	13	2	2	2	1	8	50	12.5
Cantwell	13	9	9	5	3	6	60	50
Lake Louise	13	1	1	1	1	1	100	100
Kashwitna	14	1	1	1	0	2	0	0
Peters Creek	14	4	4	4	0	23	0	0
Talkeetna	14	17	17	14	1	59	7.1	1.7
Willow	14	28	28	21	3	126	14.3	2.4
Chickaloon	14	1	1	0	0	0		
Seldovia	15	1	1	1	0	10	0	0
Nanwalek	15	1	1	1	0	0	0	
Ninilchik	15	21	21	20	8	100	40	8
Trapper Creek	16	7	7	6	2	16	33.3	12.5
Kodiak	8	24	24	17	7	96	41.2	7.3
Unalaska	10	2	2	1	0	8	0	0
Dutch Harbor	10	2	2	1	0	3	0	0
King Salmon	9	6	6	5	1	29	20	3.4
Newhalen	9	1	1	0	0	0		
South Naknek	9	1	1	0	0	0		
Dillingham	17	3	3	3	2	8	66.7	25

Table 2. Continued.

Res Community	Unit	Issued	State Res	Hunted	Kill	Days hunted	Success	CPUE
Aleknagik	17	1	1	1	1	8	100	12.5
St Marys	18	1	1	1	0	1	0	0
Akiachak	18	1	1	1	0	3	0	0
Hooper Bay	18	1	1	1	0	3	0	0
Toksook Bay	18	1	1	1	1	1	100	100
Tok	12	23	23	21	7	121	33.3	5.8
Fort Greely	20D	10	10	8	0	25	0	0
Rampart	20F	1	1	1	0	4	0	0
Healy	20C	18	18	17	1	63	5.9	1.6
Anderson	20A	14	14	10	1	42	10	2.4
Nenana	20A	83	83	71	11	234	15.5	4.7
Clear	20A	19	19	11	2	17	18.2	11.8
Delta Jct	20D	35	35	17	4	76	23.5	5.3
Denali Park	20C	5	5	4	1	20	25	5
Manley Hot Springs	20B	1	1	0	0	0		
Livengood	20B	3	3	0	0	0		
Chicken	20E	2	2	0	0	0		
Circle	25C	18	18	16	1	66	6.3	1.5
Fort Yukon	25D	43	43	42	15	200	35.7	7.5
Central	25C	440	440	351	135	2,918	38.5	4.6
Chuathbaluk	19A	1	1	1	0	10	0	0
Nulato	21D	4	4	3	2	3	66.7	66.7
Galena	21D	1	1	1	1	1	100	100
Coldfoot	24	3	3	3	2	8	66.7	25
Nome	22	1	1	1	0	1	0	0
Kotzebue	23	4	4	1	0	2	0	0
Colville Village	26	1	1	1	0	1	0	0
Barrow	26	1	1	1	0	1	0	0
Wainwright	26	1	1	1	0	7	0	0
Nuiqsut	26	1	1	1	1	1	100	100
Harvest by non-rural residents								
Fort Wainwright	20	774	774	561	108	1,480	19.3	7.3
Meadow Lakes	14	5	5	3	3	4	100	75

data for Unit 25, from 2000 to 2009, are shown in **Table 3**. When taking factor 4, "near, or reasonably accessible from the community or area," into consideration, rural residents from outside of Unit 25 who hunt caribou in Unit 25 may be reasonably excluded from a customary and traditional use determination, with a few exceptions. There is no available information indicating that the harvests by residents of communities outside of Unit 25 should be included in the customary and traditional use determination for Unit 25. For these residents, Unit 25 is not "reasonably accessible." The exception may be residents in Unit 24A. Residents of Coldfoot harvest caribou in Unit 25, as shown in **Table 2**. Between 2000 and 2009, Coldfoot residents were issued 3 permits for Unit 25 and harvested 2 caribou. Residents of Wiseman and other Unit 24A residents also hunt caribou in Unit 25 (Scott 1993; Jack Reakoff, pers. comm.). For these residents, Unit 25 is reasonably accessible and should be considered for a positive customary and traditional use determination.

Table 3. Caribou harvest by community in Unit 25, 1993-1997 (ADF&G 2011 and USFWS 2011)

Community	Caribou Harvest by Year				
	1997	1996	1995	1994	1993
ARCTIC VILLAGE	11	56	110	168	92
BEAVER	n/a	n/a	n/a	5	n/a
CENTRAL	n/a	n/a	n/a	n/a	n/a
CHALKYITSIK	n/a	n/a	n/a	n/a	n/a
CIRCLE	5	2	2	n/a	n/a
FORT YUKON	20	10	50	75	2
STEVENS VILLAGE	n/a	n/a	n/a	n/a	n/a
VENETIE	n/a	n/a	n/a	179	34

Effects of the Proposal

The effect of the proposal would be to exclude Federally qualified users from outside of Unit 25, with the possible exceptions of those residents in Unit 24A, from harvesting caribou under Federal regulations in the remainder of Unit 25 (Units 25A, 25B, and 25C). Such users could still harvest caribou under State regulations. If the proposal is adopted as written, then recognition of customary and traditional use of caribou for residents of Unit 25 would not be provided to those who have a pattern of use (residents of Unit 24A) within the remainder of Unit 25. If Federally qualified users who customarily and traditionally harvest caribou in this unit have been inadvertently excluded, they may choose to submit a proposal to be considered for a for a positive customary and traditional use determination. The Eastern Interior and Western Interior Alaska Regional Advisory Councils should provide further guidance on including appropriate rural residents.

OSM PRELIMINARY CONCLUSION

Support Proposal WP612-69 **with modification**. The modification would be to include residents of Unit 24A in the customary and traditional use determination for caribou in Unit 25 remainder.

The modified regulation should read:

Customary and Traditional Use Determination—Caribou

Unit 25D

Rural residents of Units 20F, 25D, and Manley.

Unit 25, remainder.

~~*All rural residents*~~***.Residents of Unit 25 and 24A.***

Justification

Residents of Unit 25 generally exhibit the eight factors determining customary and traditional use of caribou throughout Unit 25 remainder. Adopting the proposal would recognize the customary and traditional uses of caribou by Federally qualified rural residents of Unit 25. Modifying the proposal to include Federally qualified rural residents of Unit 24A for the remainder of Unit 25 would recognize customary and traditional uses of caribou by those residents.

LITERATURE CITED

Alaska Department of Commerce, Community and Economic Development (ADCCED), Division of Community and Regional Affairs. 2011. http://www.dced.state.ak.us/dca/commdb/CIS.cfm.

ADF&G. 2011. Community Subsistence Information System. http://www.adfg.alaska.gov/sb/CSIS

Case, M. and Libby H. 1990. *Contemporary Wild Resource Use Patterns in Tanana, Alaska, 1987*. Alaska Department of Fish and Game, Div. of Subsistence, Technical Report 178. Juneau, AK.

Caufield, R. A., 1983. *Subsistence Land Use in Upper Yukon Porcupine Communities, Alaska: Dinjii Nats'aa Nan Kak Adagwaandaii*. Alaska Department of Fish and Game, Div. of Subsistence, Technical Paper No. 16. Juneau, AK.

EIRAC. 2011. Transcripts of the Eastern Interior Alaska Subsistence Regional Advisory Council meeting, March 3-4, 2011, in Fairbanks, Alaska. Office of Subsistence Management, FWS. Anchorage, AK.

Nelson, R. K. 1973. *Hunters of the Northern Forest*. Chicago: Aldine.

Osgood, C. M. 1936. *The Han Indians: A compilation of ethnographic and historical data on the Alaska-Yukon boundary area*. Yale University Publications in Anthropology 74. New Haven.

Reakoff, J. 2011. Chair, Western Interior Subsistence Regional Advisory Council. Personal communication (phone conversation). Office of Subsistence Management. Anchorage, AK.

Scott, Carol Patricia. 1993. Continuity and Change in the Wiseman Area of Alaska: A Look at Land and Renewable Resource Use Over Time. Master of Science Thesis, University of Alaska, Fairbanks, AK. 268 pages.

Slobodin, R. 1981. Kutchin. In *Handbook of North American Indians*, Vol. 6, Subarctic. June Helm, ed. Washington, D.C.: Smithsonian Institution.

Stephen R. Braund and Associates. 2007. Yukon Flats land exchange EIS supplemental baseline study: Subsistence use areas and traditional knowledge study for Beaver, Birch Creek, and Fort Yukon, Alaska. Prepared for the U.S. Fish and Wildlife Service. Anchorage, AK.

Sumida, V. 1988 Land and resource use patterns in Stevens Village, Alaska. Technical Paper No. 129. Alaska Department of Fish and Game, Subsistence Division. Juneau, AK.

Sumida, V.1989. Pattern of fish and wildlife harvest and use in Beaver, Alaska. Technical Paper No. 140. Alaska Department of Fish and Game, Subsistence Division. Juneau, AK.

Sumida, V. and D. Anderson 1990. Pattern of fish and wildlife use for subsistence in Fort Yukon, Alaska. Technical Paper No. 179. Alaska Department of Fish and Game, Subsistence Division. Juneau, AK.

US Census. 2000. http://www.censtats.census.gov

USFWS. 2010. Yukon Flats Wildlife Refuge Proposed Land Exchange Final Environmental Impact Statement. Anchorage, AK.

USFWS. 2011. Office of Subsistence Management, Federal Permit System Database. Anchorage, AK.

ADF&G Comments on WP12-69
August 31, 2011; Page 1 of 1

Alaska Department of Fish and Game
Comments to Regional Advisory Council

Wildlife Proposal WP12-69 (GMU 25D Remainder C&T Caribou): This proposal would establish a Federal Customary and Traditional Use determination (C&T) for caribou in Unit 25 Remainder for all residents of Unit 25.

Introduction: This proposal requests the federally qualified residents of Unit 25 have a C&T for caribou in Unit 25 Reminder to narrow federal subsistence user access to the 40 Mile caribou herd. For clarity, Unit 25 Remainder is comprised of all of Unit 25 minus Unit 25D. The proponent indicates recent concerns about the potential range expansion of the 40 Mile herd and additional interest for federal subsistence harvest in Unit 25C by rural residents from outside of the area. The proponent indicates that all rural residents are currently eligible to participate in the federal subsistence hunt and increased interest is likely in this area as caribou are easily accessed. This proposal was submitted to limit participation in the Unit 25 Remainder caribou hunt to residents of Unit 25 only.

Impact on Subsistence Users: If adopted, federal subsistence users who are residents of Unit 25 will be granted proprietal opportunity to harvest caribou in Unit 25 Remainder under federal regulations. If adopted, federally qualified subsistence users residing outside Unit 25 will be prohibited from participation in this federal caribou hunt.

Opportunity Provided by State: Hunting is by joint state/federal registration permit with a fall and winter season. The state resident fall season is August 10-September 30 in the roadless portion of the herd's range and August 29-September 30 in the road accessible areas. The state non-resident fall season in the roadless area is August 10-September 20. The bag limit is 1 bull for all fall seasons. The state winter season in restricted to residents only and is December 1-February 28 with a bag limit of 1 caribou. All hunts are subject to openings and closings on short notice to prevent overharvest.

Other Comments: This proposal resulted from Eastern Interior Regional Advisory Council participation in the Fortymile Caribou Herd Harvest Coalition which includes the Council, 6 state fish and game advisory committees, Yukon First Nations, and Yukon Government. The intent of the proposal may have been to change the C&T use determination for only Unit 25C. This needs to be clarified.

Recommendation: Support for Unit 25C, No recommendation for other areas in Unit 25

WP12-70/73 Executive Summary	
General Description	Proposal WP12-70 requests dividing Unit 11 into two hunt areas, changing the harvest limits and dates of the fall moose season in Unit 12 remainder, and creating a single, joint Federal/State registration permit to administer the hunt area along the Nabesna Road in Unit 11 and Unit 12 remainder. *Submitted by the Upper Tanana Fortymile Fish and Game Advisory Committee* Proposal WP12-73 requests changing the dates of the fall moose harvest season in Unit 12 remainder and removing the spike-fork antler harvest restriction during August 15–23. *Submitted by the Wrangell-St. Elias National Park Subsistence Resource Commission*
Proposed Regulation	**WP12-70** **Unit 11 — Moose** ~~*Unit 11—1 antlered bull by Federal registration permit only.*~~ ~~*Aug. 20–Sept. 20*~~ ***Unit 11–that portion draining into the east bank of the Copper River upstream from and including the Slana River drainage—1 bull by joint Federal/State registration permit only.*** ***Aug. 20–Sept. 20*** ***Unit 11 remainder—1 antlered bull by Federal registration permit only.*** ***Aug. 20–Sept. 20*** **Unit 12 — Moose** *Unit 12 remainder—1* ~~*antlered*~~ *bull*~~*; however, during Aug. 15–Aug. 23 season, only bulls with spike fork antlers may be taken*~~ ***by joint Federal/State registration permit only***. ***Aug. 20–Sept. 20*** ~~*Aug. 15–Aug. 28*~~ ~~*Sept. 1–Sept. 17*~~ **WP12-73** **Unit 12 — Moose** *Unit 12 remainder—1 antlered bull*~~*; however, during Aug. 15–Aug. 23 season, only bulls with spike fork antlers may be taken*~~*.* ***Aug. 25–Sept. 25*** ~~*Aug. 15–Aug. 28*~~ ~~*Sept. 1–Sept. 17*~~
OSM Preliminary Conclusion	**Support** Proposals WP12-70 and WP-12-73 **with modification** to retain a harvest limit of 1 antlered bull in all of Unit 11, and to make the season dates the same (August 20–September 20) in Units 11 and 12. **Unit 11 — Moose** ~~*Unit 11—1 antlered bull by Federal registration permit only.*~~ ~~*Aug. 20–Sept. 20*~~

continued on next page

WP12-70/73 Executive Summary *(continued)*	
OSM Preliminary Conclusion (Continued)	***Unit 11—that portion draining into the east bank of the Copper River upstream from and including the Slana River drainage—****1 antlered bull* ***by joint Federal/ State registration permit. .*** ***Aug. 20–Sept. 20*** Note: Permit requirement contingent on Alaska Board of Game endorsing a joint permit in March 2013. If not endorsed, then by Federal registration permit only. ***Unit 11 remainder—****1 antlered bull* ***by Federal registration permit only.*** ***Aug. 20–Sept. 20*** **Unit 12 — Moose** *Unit 12 remainder—1 ~~antlered~~ bull~~; however, during Aug. 15–Aug. 23 season, only bulls with spike fork antlers may be taken~~* ***by joint Federal/State registration permit only****.* ***Aug. 20–Sept. 20*** *~~Aug. 15–Aug. 28~~* *~~Sept. 1–Sept. 17~~* Note: Permit requirement contingent on Alaska Board of Game endorsing a joint permit in March 2012. If not endorsed, then by Federal registration permit only.
Southcentral Regional Council Recommendation	
Eastern Interior Regional Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP12-70 AND WP12-73

ISSUE

Proposal WP12-70, submitted by the Upper Tanana Fortymile Fish and Game Advisory Committee, requests dividing Unit 11 into two hunt areas, changing the harvest limits and dates of the fall moose season in Unit 12 remainder, and creating a single, joint Federal/State registration permit to administer the hunt area along the Nabesna Road in Unit 11 and Unit 12 remainder.

Proposal WP12-73, submitted by the Wrangell-St. Elias National Park Subsistence Resource Commission, requests changing the dates of the fall moose harvest season in Unit 12 remainder and removing the spike-fork antler harvest restriction during August 15–23.

DISCUSSION

The "remainder" portion of Unit 12 is different under Federal and State regulations. Under Federal regulations, the "remainder" only includes National Park Service lands lying to the west of the Nabesna River and Glacier to the boundary of Unit 11.

Currently there are two different sets of moose season dates and harvest limits along the Nabesna Road (Units 11 and 12) and two permits/tags required for Federally qualified users hunting under Federal regulations; Unit 11 requires a Federal Registration Permit and Unit 12 remainder requires a State (green) harvest ticket. Milepost 25.2 along the Nabesna road is the boundary between Units 11 and 12.

WP12-70 would change the harvest limit to 1 bull in a proposed, newly designated portion of Unit 11 along and near the Nabesna Road and in Unit 12 remainder. It would also change the dates of the fall moose harvest season in Unit 12 remainder to August 20–September 20, to match the current season dates in Unit 11. The proponent requests the creation of a joint Federal/State permit, modeled after the joint state/federal registration moose permit RM865 utilized in Unit 20E off the Taylor Highway, which has had much better reporting compliance than the State green harvest ticket (Gross, 2011).

WP12-73 would change the fall moose harvest season in the Federal Unit 12 remainder to August 25–September 25 and would liberalize the harvest limit to 1 antlered bull for the entire season, by eliminating a spike-fork restriction during part of the current fall season.

Note: Proposals WP12-71 and -72 are related to the two proposals in this analysis, in that they request changes to the dates of the fall and winter season dates in an adjacent portion of Unit 12; that portion on Federal lands within the Tetlin National Wildlife Refuge and those lands within the Wrangell-St. Elias National Preserve north and east of a line formed by the Pickerel Lake Winter Trail from the Canadian border to Pickerel Lake.

Existing Federal Regulations

Unit 11 — Moose

Unit 11 —1 antlered bull by Federal registration permit only.	*Aug. 20–Sept. 20*

Unit 12 — Moose

Unit 12 remainder—1 antlered bull; however, during Aug. 15–Aug. 23 season, only bulls with spike fork antlers may be taken.	*Aug. 15–Aug. 28* *Sept. 1–Sept. 17*

Proposed Federal Regulations

WP12-70

Unit 11 — Moose

~~Unit 11—1 antlered bull by Federal registration permit only.~~	*~~Aug. 20–Sept. 20~~*
Unit 11–that portion draining into the east bank of the Copper River upstream from and including the Slana River drainage—1 bull by joint Federal/State registration permit only.	***Aug. 20–Sept. 20***
Unit 11 remainder—1 antlered bull by Federal registration permit only.	***Aug. 20–Sept. 20***

Unit 12 — Moose

Unit 12 remainder—1 ~~antlered~~ bull~~; however, during Aug. 15–Aug. 23 season, only bulls with spike fork antlers may be taken~~ ***by joint Federal/State registration permit only****.*	***Aug. 20–Sept. 20*** *~~Aug. 15–Aug. 28~~* *~~Sept. 1–Sept. 17~~*

WP12-73

Unit 12 — Moose

Unit 12 remainder—1 antlered bull~~; however, during Aug. 15–Aug. 23 season, only bulls with spike fork antlers may be taken~~.	***Aug. 25–Sept. 25*** *~~Aug. 15–Aug. 28~~* *~~Sept. 1–Sept. 17~~*

Existing State Regulations

Unit 11 — Moose

Unit 11	*Resident: One bull*	*CM300 Harvest permit*	*Aug. 10–Sept. 20*
	Nonresident: One bull with spike fork or 50-inch antlers or antlers with 3 or more brow tines on at least one side		*Aug. 20–Sept. 20*

Unit 12 — Moose

Unit 12—that portion including all drainages into the west bank of the Little Tok River, from its headwaters in Bear Valley at the intersection of the unit boundaries of Unit 12 and 13 to its junction with the Tok River, and all drainages into the south bank of the Tok River from its junction with the Little Tok River to the Tok Glacier.	*Resident: One bull with spike fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side*	*Harvest permit*	*Aug. 24–Aug. 28 OR Sept. 8–Sept. 17*
	Resident: One bull with spike fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side	*CM300*	*Aug. 24–Aug. 28 Sept. 8–Sept. 17*
	Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side.	*Harvest permit*	*Sept. 8–Sept. 17*
Unit 12— remainder of that portion in the Tok River drainage upstream from the Tok Cutoff Bridge, including the Little Tok River drainage.	*Resident: One bull with spike fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side*	*Harvest permit*	*Aug. 24–Aug. 28 OR Sept. 8–Sept. 17*
	Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side.	*Harvest permit*	*Sept. 8–Sept. 17*
Unit 12—that portion east of the Nabesna River, and south of the winter trail running southeast from Pickerel Lake to the Canadian border.	*Both residents and nonresidents: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side.*	*Harvest permit*	*Sept. 1–Sept. 30*
Unit 12—remainder	*Resident: One bull*	*Harvest permit*	*Aug. 24–Aug. 28 OR Sept. 8–Sept. 17*
	Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side.	*Harvest permit*	*Sept. 8–Sept. 17*

Extent of Federal Public Lands

Federal public lands comprise approximately 81% of Unit 11; 2% U.S. Forest Service managed lands and 79% National Park Service managed lands (see **Unit 11 Map**).

Federal public lands comprise approximately 59% of Unit 12; 11% U.S. Fish and Wildlife Service managed lands and 48% National Park Service managed lands (see **Unit 12 Map**).

Customary and Traditional Use Determinations

Unit 11 north of the Sanford River – Rural residents of Units 11, 12, 13A, 13B, 13C, and 13D, and Healy Lake, Chickaloon and Dot Lake.

Unit 11 remainder – Rural residents of Units 11, 13A, 13B, 13C, 13D, and Chickaloon.

Unit 12, that portion within the Tetlin National Wildlife Refuge and those lands within the Wrangell-St. Elias National Preserve north and east of a line formed by the Pickerel Lake Winter Trail from the Canadian border to Pickerel Lake – Residents of Units 12, 13C, Dot Lake and Healy Lake.

Unit 12–that portion east of the Nabesna River, and the Nabesna Glacier and south of the Winter Trail running southeast from Pickerel Lake to the Canadian border – Residents of Units 12, 13C and Healy Lake.

Unit 12 remainder – Residents of Units 11 north of the 62nd parallel, 12, 13A, 13B, 13C, 13D, and the residents of Chickaloon, Dot Lake and Healy Lake.

Regulatory History

Unit 11

In 1992, the Federal Subsistence Board added 10 days to the moose season in Unit 11, aligning it with the seasons in adjoining units. In 1999, the Board revised the customary and traditional use determinations and added five days to the start of the Unit 11 moose season. In May 2007, the Board rejected proposal WP07-20 to change the season dates to September 1–30 (FWS 2007).

Unit 12

For the regulatory history of Unit 12, see the analysis for proposals WP12-71 and -72.

State Management Goals and Objectives for moose (Tobey 2008)

Unit 11

Population Objective

- Allow the population to fluctuate as dictated by available habitat and predation rates.
- Maintain a minimum post hunting ratio of at least 30 bulls:100 cows, with 10–15 adult bulls:100 cows.

Human Use Objective

- Allow human harvest of bulls when it does not conflict with management goals for the unit or population objectives for the herd.

Unit 12

Management Goals

- Protect, maintain and enhance the moose population in concert with other components of the ecosystem.
- Continue sustained opportunities for subsistence use of moose
- Maximize sustained opportunities to participate in hunting moose.
- Maximize opportunities for the non-consumptive use of moose.

Management Objective

- Maintain a minimum post hunting ratio of at least 40 bulls:100 cows east of the Nabesna River, and a minimum of 20 bulls:100 cows in the remainder of the unit.

Intensive Management Objectives

- Population: 4000–6000 moose.
- Harvest: 250–450 moose annually.

Biological Background

Unit 11

A moose population census for all of Unit 11 has never been conducted; although density estimates have been extrapolated from trend counts beginning in the 1950s. Density estimates have ranged from 0.3 to 0.6 moose/mi^2, or between 2,500 and 3,000 moose in all of Unit 11 (**Table 1a**) between 1999 and 2009 (Tobey 2004; Schwanke 2011).

Sex and age composition trend surveys are conducted regularly in Unit 11 by the ADF&G on the western slopes of the Mount Drum Count Area 11 (CA11), an aircraft-accessible, lightly hunted moose population. The total number of moose counted in CA11 averaged 112 moose annually between 1998 and 2004. Though Unit 11 calf:cow ratios have been chronically low, the 2003–2004 calf:cow ratio in CA11 increased 67 percent from 2001 to 15 calves:100 cows (Tobey 2004). From 1998 through 2004, on average, 17 calves:100 cows were observed in CA11. Calves made up approximately 7 percent of the population during this time period. Interestingly, the bull:cow ratio averaged 117 bulls:100 cows from 1998 through 2004, which is among the highest ever observed (Tobey 2004). During this period, the bull:cow ratio greatly exceeded the ADF&G management objective of maintaining a minimum of at least 30 total bulls and 15 adult bulls:100 cows post hunting season.

In 2007 and 2010, National Park Service staff at the Wrangell-St. Elias National Park and Preserve (WRST) conducted GeoSpatial Population Estimator (GSPE) surveys in Unit 11, which covered much larger areas than previous surveys. For the Mt. Drum area, the ratios of bulls per 100 cows continued to remain high at 118:100 in 2007 and 55:100 in 2010 (**Table 1b**). Moose density increased slightly in 2010 from the 2008 survey.

Moose population information is also collected by WRST staff near the north end of Unit 11 in the Upper Copper River (UCR) moose survey area, which covers the Boulder Creek drainage east to Copper Lake. A portion of this survey area is accessible using all-terrain vehicles from the Nabesna Road, but the western portion of the survey area is accessible only by aircraft. No moose survey data is collected along the Nabesna Road, where a majority of the moose hunting occurs (Schwanke, 2011). Between 2003 and 2008 (excluding 2007), an average of 297 moose were counted annually in the UCR moose survey area (**Table 1c**) (Reid 2007). The calf:cow ratio was fairly stable, averaging 12 calves:100 cows. Calves made up about 7% of the population. The bull:cow ratio remained fairly stable as well, averaging 46 bulls:100 cows; again, well above the management objective.

Results of the 2007 and 2010 GSPE surveys for the UCR are consistent with previous surveys, with 2–3 times more moose observed than the other two survey areas. The ratios of calves per 100 cows and bulls per 100 cows were both slightly higher in 2010 (**Table 1c**) than the previous survey conducted in 2008 (**Table 1b**).

Table 1a. Unit 11 moose population demographics on the western slopes of Mount Drum, WRST, AK, 1998–2009 — a lightly hunted population (Tobey 2004, 2008; Schwanke 2011).

Year	Number of Bulls	Number of Cows	Number of Calves	Total Moose	Bulls:100 Cows	Calves/ 100 Cows	% Calves	Moose /Hour	Density Moose/ mi²
1998–99	51	46	7	104	111	15	7	24	0.4
1999–00	58	53	11	122	109	21	9	28	0.4
2000–01	58	37	9	104	157	24	9	23	0.4
2001–02	43	46	4	93	94	9	4	19	0.3
2002–03	—	—	—	—	—	---	--	---	—
2003–04	69	60	9	138	115	15	7	30	0.5
2004–05	—	—	—	—	—	—	—	—	—
2005–06	—	—	—	—	—	—	—	—	—
2006–07	57	62	30	149	92	48	20	32	0.5
2007–08	—	—	—	—	—	—	—	—	—
2008–09	63	86	15	164	73	17	9	38	0.6
Total	399	390	85	874					
Mean	57	56	12	112	125	21	9	28	0.4

Table 1b. Unit 11 moose population demographics in the Upper Copper River survey area, Boulder Creek to Copper Lake,WRST, AK, 2003–2008 — a relatively heavily hunted population accessible by aircraft and all-terrain vehicles (Reid 2007, 2008; Putera 2011).

Year	Number of Bulls	Number of Cows	Number of Calves	Total Moose	Bulls:100 Cows	Calves/ 100 Cows	% Calves
2003	97	215	21	333	45	10	6
2004	78	142	25	245	55	18	10
2005	92	183	11	286	50	6	4
2006	86	218	31	335	39	14	9
2008	77	186	22	285	41	12	8
Total	430	944	110	1,484			
Mean	86	189	22	297	46	12	7

Table 1c. Moose Population Estimates for selected areas of Unit 11, from surveys conducted in 2007 and 2010 (Reid 2008; Putera 2011).

Area	Year	Population Estimate	Moose Observed	Calf: 100 Cow	Bull: 100 Cow	No. Units Surveyed	Density (mi²)
Total Survey 3170 mi²	2007	1576 ± 244	500	19	52	87	0.50
	2010	1584 ± 214	623	17	50	94	0.50
Upper Copper 524 mi²	2007	403 ± 70	170	16	38	25	0.77
	2010	506 ± 97	193	14	51	19	0.97
Mt. Drum 349 km²	2007	232 ± 65	82	11	118	8	0.66
	2010	186 ± 51	66	35	55	11	0.53
Crystalline Hills 349 km²	2007	260 ± 93	63	29	42	9	0.74
	2010	259 ± 55	134	17	50	16	0.74

Predation on moose calves by bears and wolves has been shown to be an important limiting factor in some moose populations. The relatively high brown bear numbers in Unit 11, and possibly high wolf numbers, may be contributing to the low calf:cow ratios observed in this unit, as well as the overall low, but stable density moose population (Tobey 2008).

Unit 12

The Unit 12 moose population is considered to be of low density and relatively stable. However, in the Nabesna Road area, the density of moose is extremely low and hunting pressure has been increasing the past 5–7 years (Gross, 2011).

The ADF&G conducted moose population estimation surveys in southern Unit 12, within the Tok West and Tok Central survey areas during 1998—2006, using the geospatial population estimator (GSPE) moose survey technique (Ver Hoef 2001, Kellie and DeLong 2006). The data collected were utilized to determine population trends, herd composition in the survey areas and to estimate moose numbers in the entire unit by extrapolation (**Table 2**).

The amount of moose observed has ranged from 150 to 1,317 animals. The ratio of bulls per 100 cows has ranged from 22 to 97.The long term (1988–2006)average has been above the management objective of 40 bulls per 100 cows.

Harvest History

Unit 11

From 2000 to 2009, an annual average of 118 hunters harvested an average of 29 moose per year under State regulations (**Table 3**). On Federal lands, an annual average of 142 Federally qualified users harvested an average of 20 moose under the Federal Subsistence permit (**Table 4**) (FWS 2011). Some of the moose harvested under State regulations were likely taken on Federal lands.

Unit 12

Between 1990 and 2007, there was an annual average of 473 hunters (**Table 5**) that reported an average harvest of 115 moose per year, with a range of 71–149 (**Table 6**). However the total annual estimated harvest is higher based on estimates of unreported legal harvest, illegal harvest and accidental deaths, which averaged between 143 and 174 moose per year (Gross 2008).

Alternative for Consideration

Expand the current Federal registration permit for Unit 11 to include Unit 12 remainder on Federal lands, instead of breaking out Unit 11 into two portions. Should the Federal Subsistence Board authorize, and the Alaska Board of Game concur with, a joint State/Federal registration permit, the joint permit could be valid for all of Unit 11 and Unit 12 remainder on Federal lands.

Current Events

The proponent for WP12-70 also submitted a companion proposal to the Alaska Board of Game. The earliest the Alaska Board of Game could take up the companion proposal is March 2012 for Unit 12 (Region III). For Unit 11 (Region IV), the Alaska Board of Game is scheduled to meet in March 2013. If the proposed joint permit were adopted by the Federal Subsistence Board at its scheduled January 2012

Table 2. Unit 12 aerial moose composition counts, fall 1988—2006 (Gross 2008).

Year	Bulls: 100 Cows	Yearling bulls:100 Cows	Calves: 100 Cows	Moose observed	Adults observed	Calves observed	Percent Calves
1988	64	18	33	1133	943	189	17
1989[a]	50	13	30	1317	1094	223	17
1990	47	12	25	1256	1071	185	15
1991	49	12	24	1472	1264	200	14
1992	45	10	26	1071	906	165	15
1993[b]	26	7	36	850	662	187	22
1994[c]	38	16	39	414	327	87	21
1994[d]	97	13	25	421	374	47	11
1995[d]	82	12	26	526	461	65	12
1996	39	9	32	1258	1022	236	19
1997[c]	36	11	41	596	458	138	23
1997[d]	87	22	31	512	439	73	14
1998[e]	65	14	34	277	229	48	17
1998[f]	38	7	29	150	124	26	17
1999[b]	22	8	17	823	721	102	12
2000[g,h]	40	9	18	630	558	72	11
2000[h,i]	84	10	34	268	229	39	15
2001[g,h]	40	11	27	672	566	106	16
2001[h,i]	64	18	33	466	400	66	14
2002[g,h]	42	12	15	350	305	45	13
2003[g,h]	25	7	32	575	464	111	19
2003[h,i]	89	15	33	564	475	89	15
2004[h,i]	70	16	48	437	351	89	22
2005[g,h]	22	11	30	384	315	69	20
2006[g,h]	37	7	41	873	688	185	21

[a] Tok and Dry Tok not surveyed.
[b] Cheslina and the northern face of the Nutzotin Mountains not surveyed.
[c] Based on population estimation results from northwestern Unit 12.
[d] Cheslina, Kalukna, Nabesna and Chisana count areas were sampled using contour survey techniques.
[e] Based on population estimation results from the Chisana area, southwest Unit 12 using the “No stratification” technique.
[f] Only the north face of the Alaska Range sampled using the contour survey technique.
[g] Survey area includes state and private lands in western and northern Unit 12. Survey conducted by ADF&G.
[h] Ratios and percentages determined using weighted contributions from high and low sample areas. Actual counts of cows, calves and bulls were not used in estimates.
[i] Survey area includes Federal and private lands in eastern and southern Unit 12. Survey conducted by USFWS.

Table 3. Unit 11 Moose Harvest data, State only, 2000–2009 (FWS, 2011)

Regulatory Year	Permits issued	Permits hunted	Number harvested	Male	Female	Unkn sex	Percent Success	Days hunted	CPUE*
2000–01	110	110	30	30	0	0	27.3	763	3.9
2001–02	119	119	31	31	0	0	26.1	893	3.5
2002–03	123	123	33	33	0	0	26.8	883	3.7
2003–04	127	127	30	30	0	0	23.6	854	3.5
2004–05	111	111	30	29	0	1	27	751	4
2005–06	122	122	24	24	0	0	19.7	845	2.8
2006–07	96	96	22	22	0	0	22.9	633	3.5
2007–08	124	124	24	23	1	0	19.4	862	2.8
2008–09	128	128	30	30	0	0	23.4	890	3.4
2009–10	117	117	37	35	0	2	31.6	870	4.3
Total	1,177	1,177	291	287	1	3		8,244	

* No. of moose harvested per 100 days of effort

Table 4. Unit 11 Moose Harvest, FM1106, Federal only, 2000–2009 (FWS, 2011)

Regulatory Year	Permits issued	Permits hunted	Number harvested	Male	Female	Unkn sex	Percent Success	Days hunted	CPUE*
2000	155	116	23	22	0	1	19.8	769	3
2001	176	122	13	11	1	1	10.7	854	1.5
2002	93	56	8	7	0	1	14.3	323	2.5
2003	244	156	15	15	0	0	9.6	1,066	1.4
2004	259	150	26	26	0	0	17.3	891	2.9
2005	228	146	23	23	0	0	15.8	820	2.8
2006	251	169	19	18	0	1	11.2	1,049	1.8
2007	282	184	24	24	0	0	13	1,134	2.1
2008	277	179	28	28	0	0	15.6	1,132	2.5
2009	253	137	19	19	0	0	13.9	853	2.2
Total	2,218	1,415	198	193	1	4		8,891	

* No. of moose harvested per 100 days of effort

Table 5. Unit 12 reported moose hunter residency and success, regulatory years 1990–1991 through 2006–2007 (Gross 2008)

	Successful hunters					Unsuccessful hunters					
Regulatory Year	Local[a] Res	Non Local Res	Non Res and Uknwn	Total	(%)	Local[a] Res	Non Local Res	Non resident and Unkwn	Total	(%)	Total Hunters
1990–1991	45	26	27	98	(23)	186	131	15	332	(77)	430
1991–1992	48	49	13	110	(27)	160	132	13	305	(73)	415
1992–1993	23	35	13	71	(15)	222	164	22	408	(85)	479
1993–1994	38	33	20	91	(24)	186	90	13	289	(76)	380
1994–1995	43	28	17	88	(19)	240	118	16	374	(81)	462
1995–1996	55	34	29	118	(24)	249	113	16	378	(76)	496
1996–1997	62	41	21	124	(24)	251	119	14	384	(75)	508
1997–1998	43	29	30	102	(21)	245	125	14	384	(79)	486
1998–1999	68	46	35	149	(29)	232	110	19	361	(71)	510
1999–2000	69	41	29	139	(25)	240	155	23	418	(75)	557
2000–2001	49	41	22	112	(21)	241	144	24	409	(79)	521
2001–2002	49	27	24	101	(19)	242	155	22	419	(81)	520
2002–2003	53	43	28	124	(23)	212	170	25	407	(770	531
2003–2004	54	44	36	134	(24)	230	164	39	433	(76)	567
2004–2005	49	53	35	137	(25)	204	167	30	401	(75)	538
2005–2006	53	51	32	136	(24)	234	167	37	438	(76)	574
2006–2007	48	42	28	118	(20)	255	178	43	476	(80)	594

[a] Residents of Unit 12, 20E and eastern 20D are considered local residents. Major population centers are Eagle, Chicken, Boundary, Northway, Tetlin, Tok, Tanacross, Slana and Dot Lake.

meeting, it would likely need to be contingent upon positive action (concurrence) by the Alaska Board of Game. The proponent for WP12-73 has also submitted a proposal to Alaska Board of Game to address the "overcrowding, high hunting pressure on a low density moose population" along the Nabesna Road in Units 11 and 12 (Celleraius, 2011). Its proposal calls for changing the harvest limit for residents in the State's Unit 12 remainder from "1 bull" to "1 bull with spike-fork antlers or 50-inch antlers with 3 or more brow tines on at least one side", which would align the harvest limit with the harvest limit in Unit 11.

Effects of the Proposals

If Proposal WP12-70 were adopted:

- The Federal moose seasons, harvest limits and permit requirements along the Nabesna Road and along the trail systems off the Nabesna Road in Unit 11 and adjacent Unit 12 remainder would be aligned to simplify regulations and to improve harvest reporting.
- The requirements will be more complicated for those who also hunt elsewhere in Units 11 or 12. For the remainder of Unit 11, hunters would need a separate Federal registration permit.
- The current split season in Unit 12 remainder would be eliminated and the September portion of the season would be extended, which would result in one additional day of harvest opportunity.

Table 6. Unit 12 reported and estimated moose harvest, regulatory years 1990–1991 through 2006–2007 (Gross 2008)

Regulatory	Reported				Estimated	TOTAL
Year	Bulls	Cows	Unk	Total	Unreported, Illegal and Accidental deaths	
1990–1991	94	0	4	98	49–65	147–183
1991–1992	109	0	1	110	49–65	159–175
1992–1993	71	0	0	71	49–65	120–136
1993–1994	91	0	0	91	50–72	141–163
1994–1995	87	0	1	88	52–72	140–160
1995–1996	117	0	1	118	28–40	146–158
1996–1997	124	0	0	124	26–40	150–164
1997–1998	102	0	0	102	26–40	128–142
1998–1999	148	1	0	149	26–40	175–189
1999–2000	137	0	2	139	26–65	165–204
2000–2001	112	0	0	112	26–65	138–177
2001–2002	99	0	2	101	26–65	127–166
2002–2003	124	0	0	124	26–65	150–189
2003–2004	132	1	1	134	26–65	160–199
2004–2005	137	0	0	137	26–65	163–202
2005–2006	134	0	2	136	28–45	164–181
2006–2007	118	0	0	118	28–45	146–163

- Harvest by Federally qualified users would likely increase due to the harvest limit being liberalized to 1 bull in the affected area with a road-accessible moose population. This vulnerability necessitates improved harvest reporting to accurately determine the amount of harvest and to closely monitor the population for conservation purposes.
- The affected management agencies, ADF&G and the NPS, would need to work out the details of permit administration; how and where the joint permits are issued, how screening for (Federal) eligibility will be conducted, which agency will be the recipient of the harvest reports and how and when the results will be shared.

If Proposal WP12-73 were adopted,

- The fall season dates of August 25–September 25 in Unit 12 remainder would be different than the season dates for Unit 11 and the other two portions of Unit 12
- Harvest by Federal hunters would likely increase due to the harvest limit being liberalized and the season extending even further into the rut than the dates proposed in WP12-70.

OSM PRELIMINARY CONCLUSION

Support Proposals WP12-70 and WP-12-73 **with modification** to retain a harvest limit of 1 antlered bull in all of Unit 11, and to make the season dates the same (August 20–September 20) in Units 11 and 12.

The proposed regulations would read:

Unit 11 — Moose

~~*Unit 11—1 antlered bull by Federal registration permit only.*~~	~~*Aug. 20–Sept. 20*~~
Unit 11—that portion draining into the east bank of the Copper River upstream from and including the Slana River drainage—*1 antlered bull* ***by joint Federal/State registration permit. .***	***Aug. 20–Sept. 20***

Note: Permit requirement contingent on Alaska Board of Game endorsing a joint permit in March 2013. If not endorsed, then by Federal registration permit only.

Unit 11 remainder—*1 antlered bull* ***by Federal registration permit only.***	***Aug. 20–Sept. 20***

Unit 12 — Moose

Unit 12 remainder—1 ~~*antlered*~~ *bull*~~*; however, during Aug. 15–Aug. 23 season, only bulls with spike fork antlers may be taken*~~ ***by joint Federal/State registration permit only****.*	***Aug. 20–Sept. 20*** ~~*Aug. 15–Aug. 28*~~ ~~*Sept. 1–Sept. 17*~~

Note: Permit requirement contingent on Alaska Board of Game endorsing a joint permit in March 2012. If not endorsed, then by Federal registration permit only.

Justification

The Federal moose seasons, harvest limits and permit requirements along the Nabesna Road and along the trail systems off the Nabesna Road in Unit 11 and adjacent Unit 12 remainder would be aligned to simplify regulations. The use of a joint Federal/State registration permit should improve harvest reporting.

The population appears healthy enough to allow for a few more bulls to be harvested. However, adopting the harvest limit of 1 antlered bull proposed in WP12-73 should lessen the increase in harvest and is consistent with the harvest limit in the rest of Units 11 and 12.

LITERATURE CITED

Boertje, R.D., K. A. Kellie, C. T. Seaton, M.A. Keech, D.D. Young, B.W. Dale, L.G. Adams and A.R. Alderman. 2007. Ranking Alaska moose nutrition; signals to begin liberal antlerless harvests. Journal of Wildlife Management 71:1494–1506.

Cellarius, B. 2011. Subsistence Specialist. WRST, NPS, Copper Center, AK. Personal Communication.

FWS. 2007. Staff Analysis WP07-20. Pages 237–246 *in* Federal Subsistence Board Wildlife Meeting Materials, April 30 – May 2, 2007. Office of Subsistence Management. Anchorage, AK. 622 pages.

FWS 2011. Federal Subsistence Permit System (Permit Database). Office of Subsistence Management. Anchorage, AK.

Gross, J. A. 2008. Unit 12 moose. Pages 424–440 *in* P. Harper, editor. Moose management report of survey and inventory activities 1 July 2005 through 30 June 2007. Project 1.0. Alaska Department of Fish and Game. Juneau, AK.

Gross, J. A. 2011. Area Biologist. Alaska Department of Fish and Game, Tok, Alaska. Personal communication

Kellie, K. A., and R. A. DeLong. 2006. Geospatial survey operations manual. Alaska Department of Fish and Game. Fairbanks, Alaska, USA. Website address: http://winfonet.alaska.gov//moose/surveys/documents/GSPEOperationsManual.pdf .

Putera, J. 2011. Wildlife Biologist. WRST, NPS, Copper Center, AK. Personal Communication.

Reid. M. 2007. Wildlife Biologist. WRST, NPS, Copper Center, AK. Written Communication.

Reid. M. 2008. 2007 Aerial Moose Survey, Wrangell-St. Elias National Park and Preserve. NPS, Copper Center, AK. 10 pages.

Route, B. and B. Dale. 2004. Abundance and composition of moose in northwestern Wrangell-St. Elias National Park and Preserve, Alaska. Report #WRST-94-04. 20pp.

Schwanke, R., B. 2011. Area Wildlife Biologist. ADF&G. Glennallen, AK. Personal communication.

Tobey, R. W. 2004. Unit 11 moose management report. Pages 121–129 *in* C. Brown, editor. Moose management report of survey and inventory activities 1 July 2001–30 June 2003. ADF&G. Project 1.0. Juneau, AK.

Tobey, R.W. 2008. Unit 11 moose management report. Pages 125–133, *in* P. Harper, editor. Moose management report of survey and inventory activities 1 July 2005 through 30 June 2007. Project 1.0. Alaska Department of Fish and Game. Juneau, AK.

Ver Hoef, J. M. 2001. Predicting finite populations from spatially correlated data. 2000 Proceedings of the Section on Statistics and the Environment of the American Statistical Association. pp. 93–98.

WP12-71/72 Executive Summary	
General Description	Proposal WP12-71, submitted by the Tetlin National Wildlife Refuge, requests that the fall moose harvest in a portion of Unit 12 be changed from a split season of August 24–28 and September 8–17 to a consecutive days season of August 24–September 20 and that the season be administered through a joint State-Federal registration permit. Proposal WP12-72, submitted by the Tetlin National Wildlife Refuge, requests that the winter moose harvest season in a portion of Unit 12 be changed from November 20–December 10 to November 1–March 31 and that the season be administered through a joint State-Federal registration permit. Both proposals request a single joint State-Federal registration permit which would be valid for both the fall and winter seasons.
Proposed Regulation	**Unit 12 — Moose** *Unit 12—that portion within the Tetlin National Wildlife Refuge and those lands within the Wrangell-St. Elias National Preserve north and east of a line formed by the Pickerel Lake Winter Trail from the Canadian border to Pickerel Lake —1 antlered bull* ***by joint State-Federal registration permit (valid for both the fall and winter seasons)*** *~~The Nov.–Dec. season is open by Federal registration permit only.~~* — *Aug. 24~~–Aug. 28~~ ~~Sept. 8–Sept. 17~~* ***–Sept. 20*** / *Nov.* ***1*** *~~20–Dec. 10~~* ***–Mar. 31*** *Unit 12—that portion east of the Nabesna River, and the Nabesna Glacier and south of the Winter Trail running southeast from Pickerel Lake to the Canadian border—1 antlered bull.* — *Aug. 24–Sept. 30* *Unit 12 remainder—1 antlered bull; however, during Aug. 14–Aug. 23 season, only bulls with spike fork antlers may be taken.* — *Aug. 15–Aug. 28 Sept. 1–Sept. 17*
OSM Preliminary Conclusion	**Unit 12 — Moose** *Unit 12—that portion within the Tetlin National Wildlife Refuge and those lands within the Wrangell-St. Elias National Preserve north and east of a line formed by the Pickerel Lake Winter Trail from the Canadian border to Pickerel Lake —1 antlered bull.* ***The fall season is by joint State-Federal registration permit.*** *The Nov.~~–Dec.~~* ***Feb****. season is open by Federal registration permit only.* — *Aug. 24~~–Aug. 28~~ ~~Sept. 8–Sept. 17~~* ***–Sept. 20*** / *Nov.* ***1*** *~~20–Dec. 10~~* ***–Feb. 28***

continued on next page

WP12-71/72 Executive Summary *(continued)*	
OSM Preliminary Conclusion (Continued)	Note: Permit requirement contingent on Alaska Board of Game endorsing a joint permit in March 2012. If not endorsed, then by Federal registration permit only. *Unit 12—that portion east of the Nabesna River, and the Nabesna Glacier and south of the Winter Trail running southeast from Pickerel Lake to the Canadian border—1 antlered bull.* *Aug. 24–Sept. 30* *Unit 12 remainder—1 antlered bull; however, during Aug. 14–Aug. 23 season, only bulls with spike fork antlers may be taken.* *Aug. 15–Aug. 28* *Sept. 1–Sept. 17*
Southcentral Regional Council Recommendation	
Eastern Interior Regional Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP12-71 AND -72

ISSUE

Proposal WP12-71, submitted by the Tetlin National Wildlife Refuge, requests that the fall moose harvest in a portion of Unit 12 be changed from a split season of August 24–28 and September 8–17 to a consecutive days season of August 24–September 20 and that the season be administered through a joint State-Federal registration permit.

Proposal WP12-72, submitted by the Tetlin National Wildlife Refuge, requests that the winter moose harvest season in a portion of Unit 12 be changed from November 20–December 10 to November 1–March 31 and that the season be administered through a joint State-Federal registration permit.

Both proposals request a single joint State-Federal registration permit which would be valid for both the fall and winter seasons.

DISCUSSION

WP12-71: The proponent states that the current Federal fall season is the same as the State season, from which it was adopted. The State adopted a split fall season as a means to inhibit a large influx of urban Alaska residents from coming to the area. It was believed that if the initial part of the season were only five days, fewer people would travel the long distance to participate. The proponent states that the split season has impacted local rural residents by making it difficult for them to harvest moose. Additionally, the Federal season does not provide a priority to Federally qualified subsistence users. The proposed season of August 24 to September 20 would provide Federally qualified subsistence users almost two additional weeks of harvest opportunity. A continuous season has the added benefit of eliminating the illegal harvest that may be occurring during the current closed period between August 29 and September 7.

WP12-72: The proponent states that there has been no reported harvest in the Federal-only winter hunt (2000–2009). The proponent's intent is to provide a substantial increase in time to allow Federally qualified users more harvest opportunity. In discussions with the proponent after submission of the proposal, the proponent requested that the proposed end date of the winter season be changed to February 28 instead of March 31.

Note: Proposals WP12-70 and -73 are related to the two proposals in this analysis, in that they both request changes to the fall season dates in the adjacent Federal "remainder" portion of Unit 12; those Federal lands to the west of the Nabesna River and the Nabesna Glacier.

Existing Federal Regulations

Unit 12 — Moose

Unit 12—that portion within the Tetlin National Wildlife Refuge and those lands within the Wrangell-St. Elias National Preserve north and east of a line formed by the Pickerel Lake Winter Trail from the Canadian border to Pickerel Lake —1 antlered bull. The Nov.–Dec. season is open by Federal registration permit only.	*Aug. 24–Aug. 28* *Sept. 8–Sept. 17* *Nov. 20–Dec. 10*
Unit 12—that portion east of the Nabesna River, and the Nabesna Glacier and south of the Winter Trail running southeast from Pickerel Lake to the Canadian border—1 antlered bull.	*Aug. 24–Sept. 30*
Unit 12 remainder—1 antlered bull; however, during Aug. 14–Aug. 23 season, only bulls with spike fork antlers may be taken.	*Aug. 15–Aug. 28* *Sept. 1–Sept. 17*

Proposed Federal Regulations

Unit 12 — Moose

Unit 12–that portion within the Tetlin National Wildlife Refuge and those lands within the Wrangell-St. Elias National Preserve north and east of a line formed by the Pickerel Lake Winter Trail from the Canadian border to Pickerel Lake —1 antlered bull ***by joint State-Federal registration permit (valid for both the fall and winter seasons)*** *~~The Nov.–Dec. season is open by Federal registration permit only.~~*	*Aug. 24~~–Aug. 28~~* *~~Sept. 8–Sept. 17~~* ***–Sept. 20*** *Nov.* ***1*** *~~20–Dec. 10~~* ***–Mar. 31***
Unit 12–that portion east of the Nabesna River, and the Nabesna Glacier and south of the Winter Trail running southeast from Pickerel Lake to the Canadian border—1 antlered bull.	*Aug. 24–Sept. 30*
Unit 12 remainder–1 antlered bull; however, during Aug. 14–Aug. 23 season, only bulls with spike fork antlers may be taken.	*Aug. 15–Aug. 28* *Sept. 1–Sept. 17*

Existing State Regulations

Unit 12 — Moose

Unit 12—that portion including all drainages into the west bank of the Little Tok River, from its headwaters in Bear Valley at the intersection of the unit boundaries of Unit 12 and 13 to its junction with the Tok River, and all drainages into the south bank of the Tok River from its junction with the Little Tok River to the Tok Glacier.	*Resident: One bull with spike fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side*	*Harvest permit*	*Aug. 24–Aug. 28* *OR* *Sept. 8–Sept. 17*
	Resident: One bull with spike fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side	*CM300*	*Aug. 24–Aug. 28* *Sept. 8–Sept. 17*
	Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side.	*Harvest permit*	*Sept. 8–Sept. 17*

Unit 12— remainder of that portion in the Tok River drainage upstream from the Tok Cutoff Bridge, including the Little Tok River drainage.	*Resident: One bull with spike fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side*	*Harvest permit*	*Aug. 24–Aug. 28 OR Sept. 8–Sept. 17*
	Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side.	*Harvest permit*	*Sept. 8–Sept. 17*
Unit 12—that portion east of the Nabesna River, and south of the winter trail running southeast from Pickerel Lake to the Canadian border.	*Both residents and nonresidents: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side.*	*Harvest permit*	*Sept. 1–Sept. 30*
	Resident: One bull	*Harvest permit*	*Aug. 24–Aug. 28 OR Sept. 8–Sept. 17*
Unit 12— remainder	*Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side*	*Harvest permit*	*Sept. 8–Sept. 17*

Extent of Federal Public Lands

Federal public lands comprise approximately 59% of Unit 12; 11% U.S. Fish and Wildlife Service managed lands and 48% National Park Service managed lands (see **Unit 12 Map**).

Customary and Traditional Use Determination

Unit 12, that portion within the Tetlin National Wildlife Refuge and those lands within the Wrangell-St. Elias National Preserve north and east of a line formed by the Pickerel Lake Winter Trail from the Canadian border to Pickerel Lake – Residents of Units 12, 13C, Dot Lake and Healy Lake have a positive Customary and Traditional Use determination.

Unit 12, that portion east of the Nabesna River, and the Nabesna Glacier and south of the Winter Trail running southeast from Pickerel Lake to the Canadian border — Residents of Units 12, 13C and Healy Lake.

Unit 12, remainder — Residents of Units 11 north of the 62nd parallel, 12, 13A, 13B, 13C, 13D, and the residents of Chickaloon, Dot Lake and Healy Lake.

Regulatory History

Federal and State moose hunting regulations in Unit 12 have changed numerous times since 1989. The Federal seasons and harvest limits have most often been changed in response to the State's establishment, modification, and/or subsequent discontinuance of spike-fork seasons. The State and Federal regulations for the remote hunt area south of the Pickerel Lakes Winter Trail remained constant from 1989 and 1991, respectively, until the State Board of Game (BOG) added the unit wide August 20 to August 28 spike-fork season in 1995, and the Federal Subsistence Board followed suit in 1996. In 1998, the BOG opened the Unit 12 spike-fork season on August 15 — five days earlier. In 1999, the Federal Subsistence Board aligned the Federal regulations with the more liberal state-hunting season. In March of 2000, the BOG considered and adopted a proposal, submitted by the Alaska Department of Fish and Game (ADF&G),

which changed the State's Unit 12 moose hunting seasons and harvest limits. These changes included elimination of all spike-fork seasons in Unit 12.

Due to conservation concerns expressed by the ADF&G and staff of the Tetlin National Wildlife Refuge, the Eastern Interior Regional Advisory Council submitted Proposal WP01-41 requesting changes to the dates of the fall season and the removal of the August spike-fork season from a portion of Unit 12. The Board adopted the proposed regulations for the 2001–2002 regulatory year for the Tetlin National Wildlife Refuge portion of Unit 12 (FWS 2001). In May 2003, the Board adopted Proposal WP03-45 (FWS 2003), which established the current dates for the fall moose season and aligned with BOG actions eliminating the spike-fork season, in that portion of Unit 12 east of the Nabesna River, and the Nabesna Glacier and south of the Winter Trail running southeast from Pickerel Lake to the Canadian border. In 2007, the Board adopted WP07-57 with modification, which requested a change in the winter season dates. The Board adopted the Eastern Interior Regional Advisory Council's recommendation of November 20 – December 10.

State Management Goals and Objectives Unit 12 moose (Gross 2008):

Management Goals

- Protect, maintain and enhance the moose population in concert with other components of the ecosystem.
- Continue sustained opportunities for subsistence use of moose
- Maximize sustained opportunities to participate in hunting moose.
- Maximize opportunities for the non-consumptive use of moose.

Management Objective

- Maintain a minimum post hunting ratio of at least 40 bulls:100 cows east of the Nabesna River, and a minimum of 20 bulls:100 cows in the remainder of the unit.

Intensive Management Objectives

- Population: 4000–6000 moose.
- Harvest: 250–450 moose annually.

Biological Background

The Unit 12 moose population is considered to be of low density and relatively stable (Gross, 2011). The latest moose survey in the Tetlin NWR and adjacent areas in Wrangell-St. Elias Preserve affected by the proposal was conducted in 2008. From that survey, the moose population was estimated to be 1,843 animals, at a density of 0.62 moose per square mile (**Table 1**). Between 2004 and 2008, the ratio of calves per 100 cows declined from 47.8 to 24.5 and the ratio of yearling bulls per 100 cows declined from 16.2 to 14.

In the Tetlin NWR portion of the unit, the bull/cow ratio has been relatively high, with a range of 60–90 bulls/100 cows, in surveys conducted since 1990, so management objectives have consistently been met in the Tetlin NWR portion of Unit 12.

Harvest History

All hunters utilize a State harvest ticket for the Federal and State fall moose seasons on the Tetlin NWR. The reported harvest on the Tetlin NWR averaged 12 moose per year from 1991 to 2010, with a range of

Table 1. Observed and estimated moose population from aerial surveys on Tetlin National Wildlife Refuge and adjacent areas in Unit 12; 1990, 2000-2001, 2003-2004 and 2008 (Keller et. al. 2009)

	Year					
	1990	**2000**	**2001**	**2003**	**2004**	**2008**
Moose Observed						
Yearling Bulls	49	14	33	30	24	56
Bulls 30-50 inches	94	44	65	71	45	90
Bulls 50+ inches	74	43	81	117	76	73
Cows with no calves	260	93	159	174	119	257
Cows with one calf	48	31	58	76	65	71
Cows with two calves	4	4	4	6	12	5
Total bulls	217	101	179	218	155	219
Total cows	312	128	221	256	196	333
Total calves	56	39	66	89	89	81
Total moose	585	268	466	563	437	633
Population Estimates *						
Total Moose	1,339	844	1,411	1,317	1,272	1,843
Density (moose/mi²)	0.36	0.28	0.48	0.45	0.43	0.62
Percent Cows	43.8	45.7	49.1	46	45.8	52.7
Percent Calves	11.1	15.6	16.3	15.1	21.9	12.7
Percent Yearling Bulls	8.1	4.3	8	7	7.4	7.3
Percent Bulls	28.9	38.6	36.7	41.1	31.9	32.3
Bulls/100 Cows	71.2	84.4	74.8	89.4	69.8	61.7
Yearling Bulls/100 Cows	15.4	9.5	16.4	15.3	16.2	14
Calves/100 Cows	21.9	34	33.2	32.8	47.8	24.5

* 1990 estimates computed from MOOSEPOP (Reed 1989). All other estimates from spatial analysis (Ver Hoef 2000, 2001)

4 to 23 (**Table 2**). It should be noted that reporting has been poor for several years and it is suspected that out-of-season harvest takes place (Gross, 2011).

The winter moose season is for Federally qualified users only and is prosecuted under a Federal registration permit. Since 2000, an average of 24 permits have been issued per year, with an average of 7 people actually hunting per year (**Table 3**). To date, there has been no reported harvest of moose in the winter season.

Effects of the Proposal

If the proposal were adopted, the falls season dates would change from August 24–28 and September 8–17 to August 24–September 20 and the winter season dates would change from November 20–

Table 2. Reported moose harvest on Tetlin NWR and WRST Preserve in the affected area (UCU 404, 801, 802, 901, 903 and 12ZY001002) with State green harvest ticket, fall season, regulatory years 1990–1991 through 2009–2010 (Berg, pers. comm., based on ADF&G data, 2011; FWS 2011).

	Successful hunters			
Regulatory year	Local[a] residents	Non Local residents	Non residents	Harvest Total
1990–1991	1	2	2	5
1991–1992	3	3	2	8
1992–1993	4	2	1	7
1993–1994	1	2	1	4
1994–1995	4	3	5	12
1995–1996	5	2	1	8
1996–1997	4	3	3	10
1997–1998	4	3	4	11
1998–1999	10	1	0	11
1999–2000	7	3	2	12
2000–2001	6	2	4	12
2001–2002	10	5	2	17
2002–2003	3	7	8	18
2003–2004	11	8	5	24
2004–2005	4	6	2	12
2005–2006	4	10	5	19
2006–2007	5	7	4	16
2007–2008	6	9	5	20
2008–2009	9	6	5	20
2009–2010	4	5	4	13

[a] Residents of Unit 12, 20E and eastern 20D are considered local residents. Major population centers are Eagle, Chicken, Boundary, Northway, Tetlin, Tok, Tanacross, Slana and Dot Lake.

December 10 to November 1–March 31, which would provide an additional 14 days of harvest opportunity in the fall season and an additional 130 days in the winter season.

All users hunting in the Tetlin NWR and the northeast corner of Wrangell-St. Elias Preserve portion of Unit 12 would be required to utilize a joint State-Federal registration permit on Federal lands for the fall season instead of a State green harvest ticket. Note: If the proposed joint permit were adopted by the Federal Subsistence Board at its scheduled January 2012 meeting, it would likely need to be contingent upon positive action (adoption) by the Board of Game, which is scheduled to meet in March 2012 for Unit 12 (Region III).

There would likely be an increase in the number of moose harvested, due to longer fall and winter seasons.

Table 3 Unit 12 Moose Harvest data, Federal only winter season, 2000–2009 (FWS 2011)

Regulatory Year	Permits Issued	Permits Hunted	Number Harvested	Male	Female	Unkn Sex	Percent Success	Days Hunted	CPUE*
2000	6	4	0	0	0	0	0	9	0
2001	25	11	0	0	0	0	0	19	0
2003	32	5	0	0	0	0	0	14	0
2004	33	6	0	0	0	0	0	19	0
2005	28	8	0	0	0	0	0	19	0
2006	11	4	0	0	0	0	0	10	0
2007	41	9	0	0	0	0	0	29	0
2008	46	12	0	0	0	0	0	37	0
2009	20	9	0	0	0	0	0	27	0
Total	242	68	0	0	0	0	0	183	0

*No. of moose harvested per 100 days of effort

OSM PRELIMINARY CONCLUSION

Support WP12-71 and **Support** WP12-72 **with modification** to extend the winter season only to February 28, not March 31, and to create a joint State-Federal registration for the fall season only.

The modified regulations would read:

Unit 12 — Moose

Unit 12—that portion within the Tetlin National Wildlife Refuge and those lands within the Wrangell-St. Elias National Preserve north and east of a line formed by the Pickerel Lake Winter Trail from the Canadian border to Pickerel Lake —1 antlered bull. ***The fall season is by joint State-Federal registration permit.*** *The Nov.~~–Dec.~~* ***Feb****. season is open by Federal registration permit only.*	*Aug. 24~~–Aug. 28~~ ~~Sept. 8–Sept. 17~~* ***–Sept. 20*** *Nov.* ***1*** *~~20–Dec. 10~~* ***–Feb. 28***
Note: Permit requirement contingent on Alaska Board of Game endorsing a joint permit in March 2012. If not endorsed, then by Federal registration permit only.	
Unit 12—that portion east of the Nabesna River, and the Nabesna Glacier and south of the Winter Trail running southeast from Pickerel Lake to the Canadian border—1 antlered bull.	*Aug. 24–Sept. 30*
Unit 12 remainder—1 antlered bull; however, during Aug. 14–Aug. 23 season, only bulls with spike fork antlers may be taken.	*Aug. 15–Aug. 28* *Sept. 1–Sept. 17*

Justification

Federally qualified subsistence users would be provided an additional 113 days of harvest opportunity in the affected portion of Unit 12, with more days to hunt without competition from other users. The ratio

of bulls per 100 cows in the affected area is well above the management objective and the population appears healthy enough to allow for a few more bulls to be harvested. The joint permit for the fall season would allow managers to monitor the harvest and address conservation concerns if they arise. There has been no reported harvest in the winter season (2000–2009) and the extended season is not anticipated to increase the harvest significantly. A joint State-Federal registration permit for the winter season is unnecessary, as the State has no winter moose season in the affected portion of Unit 12. The winter season end date modification of February 28 is a result of the updated request from the proponent (see page 1).

LITERATURE CITED

Berg, N. 2011. U.S. Fish and Wildlife Service. Tetlin National Wildlife Refuge. Personal communication. Tok, Alaska.

Boertje, R.D., K. A. Kellie, C. T. Seaton, M.A. Keech, D.D. Young, B.W. Dale, L.G. Adams and A.R. Alderman. 2007. Ranking Alaska moose nutrition; signals to begin liberal antlerless harvests. Journal of Wildlife Management 71:1494–1506.

FWS. 2001. Staff Analysis WP01-41. Pages 83–94 *in* Federal Subsistence Board Wildlife Meeting Materials, May 09–10, 2001. Office of Subsistence Management. Anchorage, AK. Section 9. 117 pages.

FWS. 2003. Staff Analysis WP03-45. Pages 489–499 *in* Federal Subsistence Board Wildlife Meeting Materials, May 20–22, 2003. Office of Subsistence Management. Anchorage, AK. 757 pages.

FWS 2011. Federal Subsistence Permit System (Permit Database). Office of Subsistence Management. Anchorage, Alaska.

Gross, J. A. 2008. Unit 12 moose. Pages 134–150 *in* P. Harper, editor. Moose management report of survey and inventory activities 1 July 2005 through 30 June 2007. Project 1.0. Alaska Department of Fish and Game. Juneau, Alaska.

Gross, J. A. 2010. Alaska Department of Fish and Game. Personal communication. Tok, Alaska.

Gross, J. A. 2011. Alaska Department of Fish and Game. Personal communication. Tok, Alaska.

Keller, P. A., W.N. Johnson and H.K. Timm. 2009. Moose Population Survey, 2008. Tetlin National Wildlife Refuge. Game Management Unit 12, eastern Alaska. Progress Report 09-01. U.S. Fish and Wildlife Service, Tok, Alaska.

Kellie, K. A., and R. A. DeLong. 2006. Geospatial survey operations manual. Alaska Department of Fish and Game. Fairbanks, Alaska, USA. Website address: http://winfonet.alaska.gov//moose/surveys/documents/GSPEOperationsManual.pdf .

Ver Hoef, J. M. 2001. Predicting finite populations from spatially correlated data. 2000 Proceedings of the Section on Statistics and the Environment of the American Statistical Association. pp. 93–98.

WP12-75 Executive Summary	
General Description	Proposal WP12-75 requests that the fall moose harvest season be changed from August 24 – September 25 to August 20 – September 30 in a portion of Unit 20E, to match the existing season in another portion of the unit, and that the end date of the season in the remainder portion of the unit be extended to September 30. *Submitted by the Upper Tanana Fortymile Fish and Game Advisory Committee*
Proposed Regulation	**Unit 20E — Moose** *Unit 20E—that portion within Yukon-Charley Rivers National Preserve—1 bull* — *Aug. 20 –Sept. 30* *Unit 20E—that portion drained by the Middle Fork of the Fortymile River upstream from and including the Joseph Creek drainage—1 bull* — *Aug. ~~24~~**20**–Sept. ~~25~~**30*** *Unit 20E remainder—1 bull by joint Federal/ State registration permit only.* — *Aug. 24–Sept. ~~25~~ **30***
OSM Preliminary Conclusion	**Support**
Southcentral Regional Council Recommendation	
Eastern Interior Regional Council Recommendation	
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP12-75

ISSUE

Proposal WP12-75, submitted by the Upper Tanana Fortymile Fish and Game Advisory Committee, requests that the fall moose harvest season be changed from August 24 – September 25 to August 20–September 30 in a portion of Unit 20E, to match the existing season in another portion of the unit, and that the end date of the season in the remainder portion of the unit be extended to September 30.

DISCUSSION

The proponent is requesting that the dates of the Federal fall moose season for Bureau of Land Management administered lands in Unit 20E drained by the Middle Fork of the Fortymile River upstream from and including the Joseph Creek drainage, be changed to August 20–September 30 to match the season dates in the portion of Unit 20E within the Yukon-Charley Rivers National Preserve (Preserve). The proponent states that adoption of this proposal would benefit Federally qualified subsistence users by providing an additional 9 days to hunt moose in the affected area and would also align fall season dates in the portions of Unit 20E off the road system on Federal lands.

Existing Federal Regulations

Unit 20E — Moose

Unit 20E—that portion within Yukon-Charley Rivers National Preserve—1 bull	*Aug. 20 –Sept. 30*
Unit 20E—that portion drained by the Middle Fork of the Fortymile River upstream from and including the Joseph Creek drainage—1 bull	*Aug. 24–Sept. 25*
Unit 20E remainder—1 bull by joint Federal/State registration permit only.	*Aug. 24–Sept. 25*

Proposed Federal Regulations

Unit 20E — Moose

Unit 20E—that portion within Yukon-Charley Rivers National Preserve—1 bull	*Aug. 20 –Sept. 30*
Unit 20E—that portion drained by the Middle Fork of the Fortymile River upstream from and including the Joseph Creek drainage—1 bull	*Aug. ~~24~~**20**–Sept. ~~25~~**30***
Unit 20E remainder—1 bull by joint Federal/State registration permit only.	*Aug. 24–Sept. ~~25~~ **30***

Existing State Regulations

Unit 20E — Moose

Unit 20E drainages of the Middle Fork of the Fortymile River upstream from and including the Joseph Creek drainage	*Resident: One bull*	*Harvest permit*	*Aug. 24–Aug. 28* *Sept. 8–Sept. 17*
	Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side.	*Harvest permit*	*Sept. 8–Sept. 17*
Unit 20E remainder	*Resident: One bull by permit available in person in Tok, Delta Junction, Eagle and Fairbanks beginning Aug. 18; may not possess RC860 at the same time as RM865*	*RM865*	*Aug. 24–Aug. 28* *Sept. 8–Sept. 17*
	OR		
	Resident: One bull by permit in the Ladue River Controlled Use Area	*DM794 / 796*	*Nov. 1–Nov. 30*
	Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side by permit available in person in Tok, Delta Junction, Eagle and Fairbanks beginning Aug. 18; may not possess RC860 at the same time as RM865	*RM865*	*Sept. 8–Sept. 17*

Extent of Federal Public Lands

Federal public lands comprise approximately 24% of Unit 20E; 4% Bureau of Land Management managed lands and 20% National Park Service managed lands (**Map 1**).

Customary and Traditional Use Determination

Rural residents of Unit 20E, Unit 12 (north of Wrangell-St. Elias National Preserve), Circle, Central, Dot Lake, Healy Lake and Mentasta Lake have a positive customary and traditional use determination for moose in Unit 20E.

Regulatory History

In 2000, the Alaska Board of Game created registration hunt RM865 in Unit 20E (excluding the Middle Fork Fortymile River) and split the moose season into two periods: August 24–28 and September 8–17, except within the Yukon River drainage, where the season became August 24–28 and 5–25 September. The Alaska Board of Game also stipulated that a hunter could hunt both moose (RM865) and caribou (RC860), but not hold a registration permit for both species at the same time. These actions were in response to increased moose harvest, due to increasing numbers of caribou hunters in most of Unit 20E, and were designed to stabilize the moose harvest to maintain the bull:cow ratio within the management objective (listed below).

In 2002, the Alaska Board of Game reduced the season within the Yukon River drainage to match the season in the remainder of Unit 20E (August 24–28 and September 8–17).

Prior to the 2004–2005 regulatory year, the Alaska Board of Game changed to the present area descriptions (listed above in State regulations), from the previous area descriptions of **"***Unit 20E draining into the Middle Fork of the Fortymile River upstream from the drainage of the North Fork Fortymile River"* and *"Remainder of Unit 20E."* The seasons and bag limits did not change.

In 2006, the Alaska Board of Game identified the entire Unit 20E moose population as being important for providing high levels of human consumptive use under the Intensive Management law (AS 16.05.255[e]–[g]), and applied the intensive management objectives to the entire unit. From 2000 to 2005, these intensive management objectives only applied to the moose populations within the drainages of the Fortymile and Ladue rivers.

In February 2010, the Eastern Interior Alaska Subsistence Regional Advisory Council deliberated wildlife proposal WP10-101, submitted to the Federal Subsistence Board, and recommended breaking out the proposed single, all-encompassing Unit 20E area description into three area descriptions to retain the Yukon-Charley Rivers National Preserve portion and to closely align the other two portions with State regulations for purposes of permit administration and harvest reporting. The Board adopted the Council's recommendation and the (current) regulations were effective 1 July 2010.

Unit 20E State Management Goals and Objectives for moose (Gross 2008):

Management Goals

- Protect, maintain and enhance the moose population in concert with other components of the ecosystem
- Continue sustained opportunities for subsistence use of moose
- Provide for a sustained harvest and promote moose habitat enhancement by allowing natural fires to alter vegetation.

Management Objective

- Maintain a post hunting ratio of at least 40 bulls:100 cows in all survey areas

Biological Background

The ADF&G conducted moose population estimation surveys in southern Unit 20E, within the Tok West and Tok Central survey areas during 1998—2009, using the geospatial population estimator (GSPE) moose survey technique (Ver Hoef 2001, Kellie and DeLong 2006). The data collected were utilized to determine population trends, herd composition in the survey areas and to estimate moose numbers in the entire unit by extrapolation (**Table 1**).

The highest densities of moose have been in a portion of southern Unit 20E, entirely within the Tok West and Tok Central moose survey areas, including the Mosquito Fork Fortymile River drainage downstream from and including Mosquito Flats, the West Fork Fortymile River drainage and the northern Mount Fairplay — lower Dennison Fork Fortymile River areas, where habitat availability and quality are also highest.

The bull:cow ratio remained above 40 bulls:100 cows (1998–2009), but varied across the unit. In the most popular hunting areas — Nine Mile Trail, Mitchell's Ranch, and along the Yukon River and the Taylor

Table 1. Moose population estimates for portions of Unit 20E using GSPE, fall 1998—2009 (Gross 2008; 2010).

Year	Bulls: 100 Cows	Yearling bulls:100 Cows	Calves: 100 Cows	Percent Calves	Total moose observed	Density moose/mi^2 (90% CI)	Population estimate (90% CI)
1998[a]	64	18	19	10	278	0.56	1,086
1998[b]	59	14	23	14	450	0.62	1,694
1999[a]	80	16	22	10	365	0.47	901
2000[a]	60	11	14	8	561	0.58	1,115
2000[c]	49	11	21	13	347	0.70	1,272
2001[a]	76	9	14	7	531	0.47	915
2001[d]	51	6	10	6	624	0.75	2,026
2002[a]	59	10	25	14	364	0.60	1,166
2002[d]	71	8	20	10	396	0.63	1,707
2003[e]	64	9	15	9	355	0.58	1,128
2003[d]	53	5	11	6	297	0.51	1,379
2004[f]	61	11	26	14	283	0.59	1,435
2004[g]	48	11	23	14	233	0.37	802
2005[f]	55	13	30	16	543	0.73	1,801
2005[g]	48	8	16	10	344	0.50	1,097
2006[f]	39	9	37	20	584	0.98	2,398
2006[g]	46	3	24	14	520	0.45	979
2007[f]	50	11	30	16	503	0.86	2,098
2007[g]	46	11	22	13	440	0.62	1,348
2008[f]	47	11	27	16	509	.83	2040
2008[g]	72	16	31	16	356	.72	1571
2009[f]	63	18	34	18	585	1.00	2445
2009[g]	51	11	25	14	461	0.68	1471

[a] Tok West Survey Area, 1,932 mi$^{2)}$ sampled
[b] Tok Central Survey Area, 2,750 mi$^{2)}$ sampled
[c] Tok Central Survey Area, 1,821 mi$^{2)}$ sampled
[d] Tok Central Survey Area, 2,703 mi$^{2)}$ sampled
[e] Tok West Survey Area, 1,944 mi$^{2)}$ sampled
[f] Tok West Survey Area, 2,452 mi$^{2)}$ sampled
[g] Tok Central Survey Area, 2,178 mi$^{2)}$ sampled

Highway — bull populations were noticeably lower, but still the bull:cow ratio remained ≥ 40 bulls:100 cows (**Table 1**) (Gross 2008; 2010).

Twinning rates in the southern portion of Unit 20E were moderate at 24–30% in 2004, 2005 and 2007, but higher in 2006 at 47% (Gross 2008). These twinning rates indicate that nutritional status is adequate to support an increase in the moose population (Boertje et. al. 2007).

Harvest History

Between 1998 and 2009, the reported number of hunters in Unit 20E averaged 647 per year, with a range of 472–913 (**Table 2**). The reported harvest averaged 144 moose per year, with a range of 95–174 (**Table 3**). Illegal harvest is estimated at 5–10 moose per year (Gross 2008).

Table 2. Unit 20E reported moose hunter residency and success, regulatory years 1998–1999 through 2006–2009 (Gross 2008; 2010)

	Successful hunters					Unsuccessful hunters					
Regulatory Year	Local[a] Res	Non Local Res	Non Res /Uknwn	Total	(%)	Local[a] Res	Non Local Res	Non Res /Unkwn	Total	(%)	Total Hunters
1998–1999	47	91	12	150	(32)	76	205	39 / 2	322	(68)	472
1999–2000	36	77	17 /1	131	(23)	98	299	30 / 4	431	(77)	562
2000–2001	36	84	15	135	(26)	98	255	33 / 1	387	(74)	522
2001–2002	33	88	16 /1	138	(19)	222	323	58 / 4	607	(81)	745
2002–2003	29	119	20 /1	169	(18)	200	449	92 / 3	744	(82)	913
2003–2004	21	81	26 /1	129	(16)	143	448	74 / 4	669	(84)	798
2004–2005	20	55	19	94	(19)	102	238	47 / 3	390	(81)	484
2005–2006	25	83	29	137	(22)	129	311	58 / 1	499	(78)	636
2006–2007	27	85	18	130	(19)	131	364	68 / 2	565	(81)	695
2007–2008	25	107	12	144	(19)	141	374	90	605	(81)	749
2008–2009	26	130	23	179	(23)	134	375	81	591	(77)	770

[a] Residents of Unit 12 and Unit 20E and eastern 20D are considered local residents. Major population centers are Eagle, Chicken, Boundary, Northway, Tetlin, Tok, Tanacross, Slana and Dot Lake.

Effects of the Proposal

If the proposal were adopted, the fall season dates in portions of Unit 20E would be changed to August 20–September 30. This aligns Federal regulations in those portions of Unit 20E off the road system on Federal lands.

If adopted, this proposal would provide an additional 9 days of harvest opportunity for Federally qualified subsistence users in the portion of Unit 20E drained by the Middle Fork of the Fortymile River upstream from and including the Joseph Creek drainage; more days to hunt without competition from non-subsistence users. Federally qualified subsistence users would also be provided an additional 5 days of harvest opportunity in Unit 20E remainder.

Table 3. Unit 20E reported moose harvest, regulatory years 1998–1999 through 2008–2009 (Gross 2008; 2010)

Regulatory	General and registration					Drawing permits			TOTAL
Year	Bulls	Cows	Unk	Total		DM794	DM796	Total	
1998–1999	145	0	5	150		1	10	11	161
1999–2000	127	0	4	131		3	9	12	143
2000–2001	135	0	0	135		2	6	8	143
2001–2002	137	0	1	138		5	3	8	146
2002–2003	169	0	1	170		1	3	4	174
2003–2004	129	0	0	129		0	0	0	129
2004–2005	93	0	1	94		1	0	1	95
2005–2006	137	0	0	137		1	0	1	138
2006–2007	129	1	0	130		0	0	0	130
2007–2008	144	0	0	144		0	0	0	144
2008–2009	176	0	0	176		1	2	3	179

There would likely be an increase in the number of moose harvested, due to the season extending into the rut, when moose are more vulnerable. The population appears healthy enough to allow for a few more bulls to be harvested.

OSM PRELIMINARY CONCLUSION

Support Proposal WP12-75.

Justification

The fall season dates would become uniform for Federally qualified subsistence users in those portions of Unit 20E off the road system.

Federally qualified subsistence users would be provided an additional 9 days of harvest opportunity in the affected portion of Unit 20E (outside the Preserve), and 5 more days to hunt in Unit 20E remainder without competition from non-subsistence users.

The population appears healthy enough to allow for a few more bulls to be harvested.

LITERATURE CITED

Boertje, R.D., K. A. Kellie, C. T. Seaton, M.A. Keech, D.D. Young, B.W. Dale, L.G. Adams and A.R. Alderman. 2007. Ranking Alaska moose nutrition; signals to begin liberal antlerless harvests. Journal of Wildlife Management 71:1494–1506.

Gross, J. A. 2008. Unit 20E moose. Pages 424–440 *in* P. Harper, editor. Moose management report of survey and inventory activities 1 July 2005 through 30 June 2007. Project 1.0. Alaska Department of Fish and Game. Juneau, Alaska.

Gross, J. A. 2010. Alaska Department of Fish and Game. Personal communication. Tok, Alaska.

Kellie, K. A., and R. A. DeLong. 2006. Geospatial survey operations manual. Alaska Department of Fish and Game. Fairbanks, Alaska, USA. Website address:

http://winfonet.alaska.gov//moose/surveys/documents/GSPEOperationsManual.pdf .

Ver Hoef, J. M. 2001. Predicting finite populations from spatially correlated data. 2000 Proceedings of the Section on Statistics and the Environment of the American Statistical Association. pp. 93–98.

DRAFT STAFF ANALYSIS
SPECIAL ACTION REQUEST
WSA11-03

ISSUES

Emergency Special Action WSA11-03, submitted by the Kenai National Wildlife Refuge, requests that the moose harvest limits in Units 15B and 15C be revised from 1 antlered bull with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler to 1 antlered bull with 50-inch antlers or 4 or more brow tines only during the Oct. 20 – Nov. 10 season. In addition, the proponent requests the antlers of a harvested moose be taken to an authorized representative within 10 days of harvest to be inspected and sealed.

DISCUSSION

The proponent states that recent moose composition surveys indicate that there are conservation concerns for the moose population in Unit 15 since the bull: cow ratios (in portions of the area) are very low (9 bulls:100 cows) and declining. These low bull:cow ratios, if not corrected, could lead to low productivity and potentially severe moose population declines on the Kenai Peninsula in the future. Modifying the antler restrictions should reduce the harvest of bulls in order to address these conservation concerns while still allowing a hunt opportunity. This change in antler restrictions is meant to be a short-term solution of approximately two years to allow the increase in bull:cow ratios. In March 2011, the Alaska Board of Game (BOG) adopted the similar antler restrictions and without a similar action in Federal regulations, any conservation gains may be compromised as 88% of the lands in Unit 15B and 30% of the lands in Unit 15C are Federal public lands. In addition, sealing the antlers within 10 days of harvest will allow for more accurate tracking of harvest of legal moose.

The applicable Federal regulations for Special Actions are found in 50 CFR 100.19(a), state that: "…*In an emergency situation, if necessary to ensure the continued viability of a fish or wildlife population, to continue subsistence uses of fish or wildlife, or for public safety reasons, the Board may immediately open or close public lands for the taking of fish and wildlife for subsistence uses, or modify the requirements for take for subsistence uses, or close public lands to take for nonsubsistence uses of fish and wildlife, or restrict the requirements for take for nonsubsistence uses."*

Existing Federal Regulation

Units 15B and 15C Moose

1 antlered bull with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler, by Federal registration permit only.	*Oct. 20 – Nov. 10*

Proposed Federal Regulation

Units 15B and 15C Moose

*1 antlered bull with ~~spike-fork or~~ 50-inch antlers or with ~~3~~ **4** or more brow tines on either antler, by Federal registration permit only.* ***Antlers will be required to be inspected and sealed by an authorized representative.***	*Oct. 20 – Nov. 10*

Existing State Regulations

Units 15B and 15C Moose

One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side	*Aug. 20 – Sept. 20*

Units 15B-East

One bull with 50-inch antlers or antlers with 3 or more brow tines on at least one side by permit (50 permits for drawing hunt)	*Sept. 1 – Sept. 20*

Extent of Federal Public Lands

In Unit 15B, 88% are lands managed by the Kenai National Wildlife Refuge. In Unit 15C, 30% of the lands are managed by the Kenai National Wildlife Refuge and less than 1% are lands managed by the Kenai Fjords National Park (**Unit 15 Map**).

Customary and Traditional Use Determinations

Residents of Cooper Landing, Ninilchik, Nanwalek, Port Graham and Seldovia have a positive customary and traditional use determination for moose in Units 15A and 15B.

Residents of Ninilchik, Nanwalek, Port Graham and Seldovia have a positive customary and traditional use determination for moose in Unit 15C.

Regulatory History

Unit 15

In July 1995, the Board adopted a positive customary and traditional use determination for moose for Ninilchik, Nanwalek, Port Graham and Seldovia in Units 15B and 15C. At the same time, the Board authorized an August 10–September 20 season with a spike-fork, 50-inch, or three or more brow tines on at least one antler regulation restriction. This provides a ten-day opportunity for Federally qualified subsistence hunters prior to the State season opening. At the time it authorized the hunt, the Board deferred making a decision with regard to customary and traditional uses of moose in Unit 15A "because use of this subunit by residents of Ninilchik and Seldovia is extremely low" (60 FR 40462).

Following Board action in 1995, the Ninilchik Traditional Council (NTC) submitted three proposals dealing with moose in Unit 15. In Proposal 23, the NTC sought to expand the positive customary and traditional use determination for Ninilchik, Nanwalek, Port Graham and Seldovia for moose in Unit 15A. In Proposal 24, the NTC requested a September 11–30 moose season with a one cow harvest limit for all of Unit 15. In Proposal 25, the Traditional Council requested a September 11–30 moose season for all of Unit 15, with a harvest limit of one antlered bull.

The Southcentral Alaska Subsistence Regional Advisory Council (Southcentral Council) supported Proposal 23—the positive customary and traditional use determination in Unit 15A for the four communities; opposed Proposal 24, allowing a cow season; and supported Proposal 25 with modification for an August 15–September 25 season and harvest limit of any bull from August 15–19 and September 21–25, with the spike-fork, 50-inch, or three or more brow tines on at least one antler regulation restriction in affect August 20–September 20. At its May 3, 1996 meeting, the Board rejected all three proposals (FSB 1996*a*).

In January 1996, the NTC filed a complaint in the District Court for Alaska challenging the Board's decision to impose the spike-fork, 50-inch, or three or more brow tines on at least one antler rule on Federally qualified subsistence users, as well as the Board's deferral of a customary and traditional use determination in Unit 15A. On June 13, 1996, the District Court upheld the antler restriction, but remanded the customary and traditional use determination for Unit 15A back to the Board. The Court found that the Board had adequately explained its rationale for making positive customary and traditional use determinations for Units 15B and 15C, but not for Unit 15A.

In July 16, 1996, the Board took up the issue of the remand and was provided additional information on customary and traditional uses of moose in Unit 15A. The Board reversed its May 1996 decision and made a positive customary and traditional use determination for moose in Unit 15A for Nanwalek, Port Graham, Seldovia and Ninilchik. The Board also adopted a moose season in Unit 15A to run August 18–September 20 for one bull moose with the spike-fork, 50-inch, or with three or more brow tines on at least one antler restriction. The Board justified its action as follows:

> *The moose population in Unit 15A is stable at or near the carrying capacity of the habitat. The antler restrictions contained in this proposal should provide adequate protection from over harvest of breeding age bulls. The proposal is anticipated to have no significant impact on the total moose harvest in this unit, and is consistent with the conservation of a healthy moose population (FSB 1996b).*

The Board's decision to change the start of 1995 the season from August 10 to August 18 in Units 15B and 15C reduced the Federal subsistence hunt from 10 days to 2.

The Kenai Peninsula Outdoor Coalition submitted Request for Reconsideration (RFR) 96-01 on July 29, 1996, seeking a reversal of the Board's decision. Specifically, the coalition argued that the Board should abolish the Federal subsistence opportunity for moose in Unit 15A and eliminate the season. On August 14, 1996, the Board rejected the RFR (FSB 1996*c*).

Subsequent to the Board's actions, the NTC filed an amended complaint in October 1996, re-asserting its challenge to the antler size restriction and claiming that the Board had failed to properly provide for a subsistence priority as required by ANILCA. The District Court ultimately found in favor of the Federal Subsistence Board. The NTC then appealed to the Ninth Circuit Court of Appeals.

The Southcentral Council submitted a proposal to make permanent the regulations adopted for the 1996 season. This proposal (WP98-039) had the same season dates, August 18–September 20, and a harvest limit of one antlered bull with the spike-fork, 50-inch or three brow times on at least one antler restriction. This proposal was adopted by the Board at its May 1998 meeting.

The Ninth Circuit Court of Appeals rendered its decision on the NTC lawsuit on July 31, 2000 (Ninilchik Traditional Council et al. v. U.S., 227 F.3d 1186 (9th Cir. 2000)). The Court held that the Board's interpretation of the term "priority" as defined by ANILCA was reasonable, and meant to balance

the competing aims of subsistence use, conservation, and recreation; while at the same time provide subsistence hunters with a meaningful opportunity. However, the Court also found that the Board had failed to provide support in the record for its conclusion that the two days reserved for Federally qualified subsistence users in Unit 15A constituted a priority.

Consequently, in 2001 the Office of Subsistence Management (OSM) submitted Proposal WP01-50, requesting that the dates of the subsistence moose season in Unit 15A be changed from August 18–September 20 to August 10–September 20. The Board adopted this change in May 2001, providing a total of ten days to Federally qualified subsistence users before the start of the State's general season.

In 2003, Proposal WP04-87 requested that the moose season for Unit 15A remainder be shortened by ten days from August 10–September 20 to August 20–September 20. The Board rejected this proposal at its May 2004 meeting.

Based on conservation concerns raised by the Southcentral Council, at its May 3–4, 2005 meeting, the Federal Subsistence Board deferred Proposal WP05-07, and instead considered maintaining the existing August 10–September 20 season and providing more opportunity by the addition of a late season (September 26–October 15). Ultimately, the Board noted that the additional three week season was not requested by the proponent, and because it took place during the rut, it could have an adverse affect on the moose population. Finally, the Board stated that the public should have an opportunity to comment on the season recommended by the Southcentral Council, as well as other alternatives that could potentially affect moose populations.

At its October 2005 meeting, the Southcentral Council recommended a compromise solution: retain the original August 10–September 20 season dates, but add a different late season to run October 20–November 10 in Units 15B and 15C (but not in Unit 15A). The harvest limit would remain one antlered bull with the spike-fork, 50-inch, or three or more brow tines on at least one antler restriction. The late season addressed the issue of avoiding the moose rut while providing more opportunity for subsistence users to harvest moose closer to the time period when they customarily and traditionally hunted. Excluding Unit 15A from the compromise eliminated the road access issues and associated conservation concerns. At its May 2006 meeting, the Board adopted the late season hunt as recommended by the Southcentral Council.

In 2006, the Kenai NWR Manager made two suggestions to improve the permitting process for the Unit 15B and 15C Federal late fall moose hunt:

> *Use bold print on the permit, highlighting: "Successful hunters must report their harvest within 5 days of the kill to Kenai NWR in person or by phone at (262-7021). In addition, the completed harvest report must be returned within 15 days of the close of the season, whether the hunter was successful or not. Failure to report harvest or return the harvest report may result in permits not being issued the following year and/or a citation."*
>
> *One permit should be issued, rather than two (good for both the early and late season), stating: "Kenai NWR lands in Units 15A (except Skilak Wildlife Recreation Area), 15B, and 15C, August 10 – September 20; and Kenai NWR lands in Units 15B and 15C, October 20 – November 10; 1 bull moose with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler."*

In addition, permit applicants were required to sign an affidavit and provide evidence of their rural resident status.

In spring 2007, the Board heard testimony on the Unit 15B and 15C late fall Federal moose hunting season. Proposal WP07-22 requested the elimination of the Federal late hunt or cap the number of permits at ten for Federally qualified subsistence users. The Board rejected Proposal WP07-22, not wanting to eliminate the late fall Federal subsistence moose hunt after only one season, especially since out of 46 permits issued, only two bulls were taken by 36 hunters (OSM 2007). In addition, no evidence was presented to the Board in 2006 or 2007 indicating there have been any adverse effects on the moose populations in either Units 15B or 15C.

In 2008, WP08-17/18 requested that the late fall season (Oct. 20 – Nov. 10) for moose be eliminated in Units 15B and 15C. The Board opposed WP08-17/18 because the Kenai NWR Manager is authorized to close the hunt in consultation with the Southcentral Regional Advisory Council and ADF&G area biologist. Reporting requirements allow the refuge manager the ability to address any conservation concerns that may develop during the late season hunt.

In 2010, the Alaska Board of Game (BOG) closed nonresident hunting for the general season bull hunts in Units 15A and 15C for regulatory year 2011/2012. In addition, the BOG changed the antler restrictions from 3 brow tines to 4 brow tines and removed the spike-fork option to harvest a moose.

Biological Background

Moose densities vary throughout Unit 15 and are dependent upon the availability of suitable browse. The availability of suitable browse primarily results from fire creating a disturbance and providing conditions suitable for hardwood regeneration to occur. Following a significant disturbance such as a landslide or intense wildfire, various species of hardwood trees and shrubs will grow providing quality winter browse for moose and other species (FWS 2001). The high moose populations in recent decades were indicative of high-quality habitat that was created by the historic burns on the Kenai Peninsula. In more recent years, the hardwood browse has been replaced by spruce or has matured past suitable browse for moose (Berg 2009). The major browse species for moose on the Kenai Peninsula are paper birch (*Betula papyrifera*), aspen (*Populus tremuloides*), willow (*Salix sp.*), alder (*Alnus sp.*), and lowbush cranberry (*Vaccinium vitisidaea*) (Oldemeyer et al. 1977). The hardwood vegetation type represents 5% of the Kenai National Wildlife Refuge (or 10% of the forests on the Refuge) and 40% is early successional and intermediate-stage hardwood (USFWS 2010).

Browse regeneration can also result from timber harvesting or other natural (e.g. spruce bark beetle outbreak) or man-made disturbance (e.g. hydroaxing). Dendrochronolgy studies have shown that bark beetles have been historically active on the Kenai Peninsula at low levels, however the outbreak from 1989-2003 was of unprecedented size and intensity and infested 800,000 acres on the Kenai Peninsula (USFWS 2010). Increasing temperatures and drought stress because of climate change likely increased the rate of spruce bark beetle outbreaks on the Kenai Peninsula (Berg et al. 2006). In addition, the invasion of wetlands on the Kenai Peninsula by woody shrubs and black spruce may lead to a reduced moose population in the long-term (Klein et al. 2005). Wetlands are an important component for moose for wintering forage and the trend for vegetation succession of these habitat types is increasing (Klein et al. 2005 and Stephenson et al. 2006).

Recent documented declines in bull:cow ratios within Unit 15 and the observed decline in bull:cow ratios within portions of Unit 15A and throughout Unit 15C are conservation concerns. The low bull:cow ratios, if not corrected, could lead to low productivity and potentially severe moose population declines on the Kenai Peninsula in the future. Currently, moose populations are at or near historic lows and appear to be declining within Unit 15A appear to stable but below historic highs within Unit 15B, and declining from historic highs within Unit 15C (**Table 1 and Figure 1**).

Table 1. Unit 15C Aerial moose composition counts, 1990/91–2010/11 (Spraker 2002, Selinger 2006, 2008 and 2011, pers. comm.)

Year	Bulls:100 Cows	Calves:100 Cows	% Calves	Adults	Total Moose Observed
1990/91	37	22	14	259	301
1991/92	36	17	23	705	913
1992/93	28	33	21	663	834
1993/94	86	22	10	69	77
1994/95	19	41	26	1,283	1,727
1996/97	37	28	17	285	343
1997/98	31	46	26	649	877
1998/99	61	31	16	87	104
1999/00	27	18	12	506	578
2001/02	10	49	31	309	448
2003/04	26	33	15	626	1,059
2005/06	21	27	18	637	780
2007/08	12	18	14	183	212
2008/09	13	10	8	492	537
2009/10	13	18	14	368	426
2010/11	9	19	15	617	725
Totals	466	460	312	7,994	10,270
Means	29	29	20	500	642

Low populations, when combined with the low bull:cow ratios, may be of significant biological concern. Moose management throughout most of Alaska intentionally skews the ratio of adults toward females and the harvest strategy on the Kenai Peninsula focused on selective harvest to facilitate recruitment into the prime breeding class and to increase bull:cow ratio (Bishop and Rausch 1974, Schwartz et al. 1992). While there is no defined bull:cow ratio that will be suitable for all populations, the ratio of males to females must be considered with moose density and distribution within the managed area. Widely distributed populations with very low densities may require higher ratios to ensure adequate reproduction whereas high density populations may not. The combination of antler size, form, and symmetry that cows recognize when selecting mates is not fully understood (Solberg and Saether 1993, Bower et al. 2001, Saether et al. 2003). However, prolonged harvests of large antlered bulls may reduce genetic variability over time and cause an irreversible loss of alleles specific to antler features (Hundertmark and Bowyer 1998, Bowyer et al. 2002).

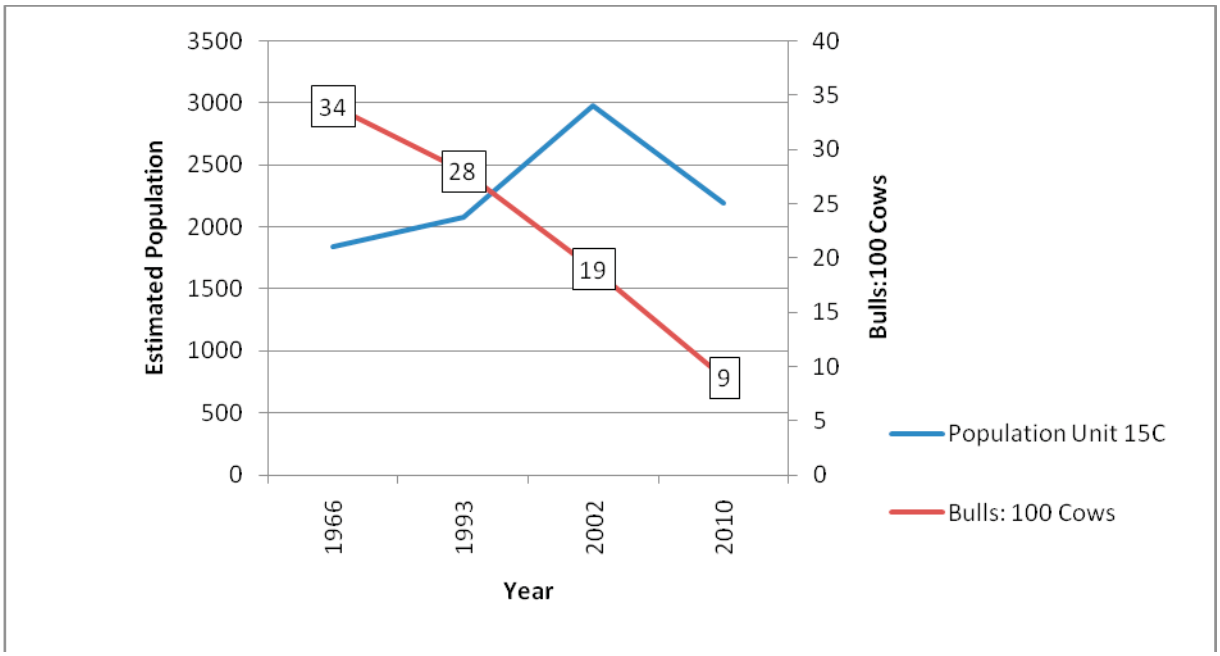


Figure 1. Unit 15C Population Data

Other factors contributing to the declining moose population include vehicle collisions and predation. From 1980 to 1986, an average of 200 moose/year were reported killed in vehicle collisions on the Kenai Peninsula (Bangs et al. 1989). From 2004 to 2011, vehicle collisions continued to be a significant source of mortality for moose on the Kenai with an average of 213 moose/year killed (**Table 2**); most mortality being cows or calves (Miller, pers. comm. 2011). In 2008, the Sterling Highway Project began to gather information on where moose and other wildlife are crossing the Sterling Highway between milepost 58 and 78 where the majority of wildlife-vehicle collisions occur to attempt to mitigate moose mortality by planning wildlife crossings. Schwartz and Franzmann (1989) found that predation by black bears accounted for 81% of all predation mortality from 1978-1988, but moose densities were regulated by habitat quality and quantity between two burned areas 1947 and 1969 on the Kenai Peninsula.

Unit 15B

Kenai NWR has established a minimum post-hunting season sex ratio of 25-30 bulls:100 cows within the western portion of Unit 15B and 40-60 bulls:100 cows within the eastern portion of the unit (USFWS 1996). The State's management objectives for Unit 15B west in the central Kenai Peninsula are to maintain a bull:cow ratio of 15:100 and for Unit 15B east (**Map 1**) to maintain a bull:cow ratio of 40:100 (McDonough 2004, Selinger 2006, Selinger 2008). There has been little change in habitat conditions within Unit 15B since there have been no major or minor wildfires and most of the area is designated wilderness (USFWS 2010).

The most up-to-date census figures for Unit 15B are from 2001 when the population was estimated at 958. Composition surveys were completed in 2010/11. These composition surveys estimated 33 bulls:100 cows. Calves were estimated to comprise 6% of the population. The 2010/11 composition surveys were conducted within Unit 15B east where the USFWS has a 40-60 bulls:100 cows management objective.

MAP 1

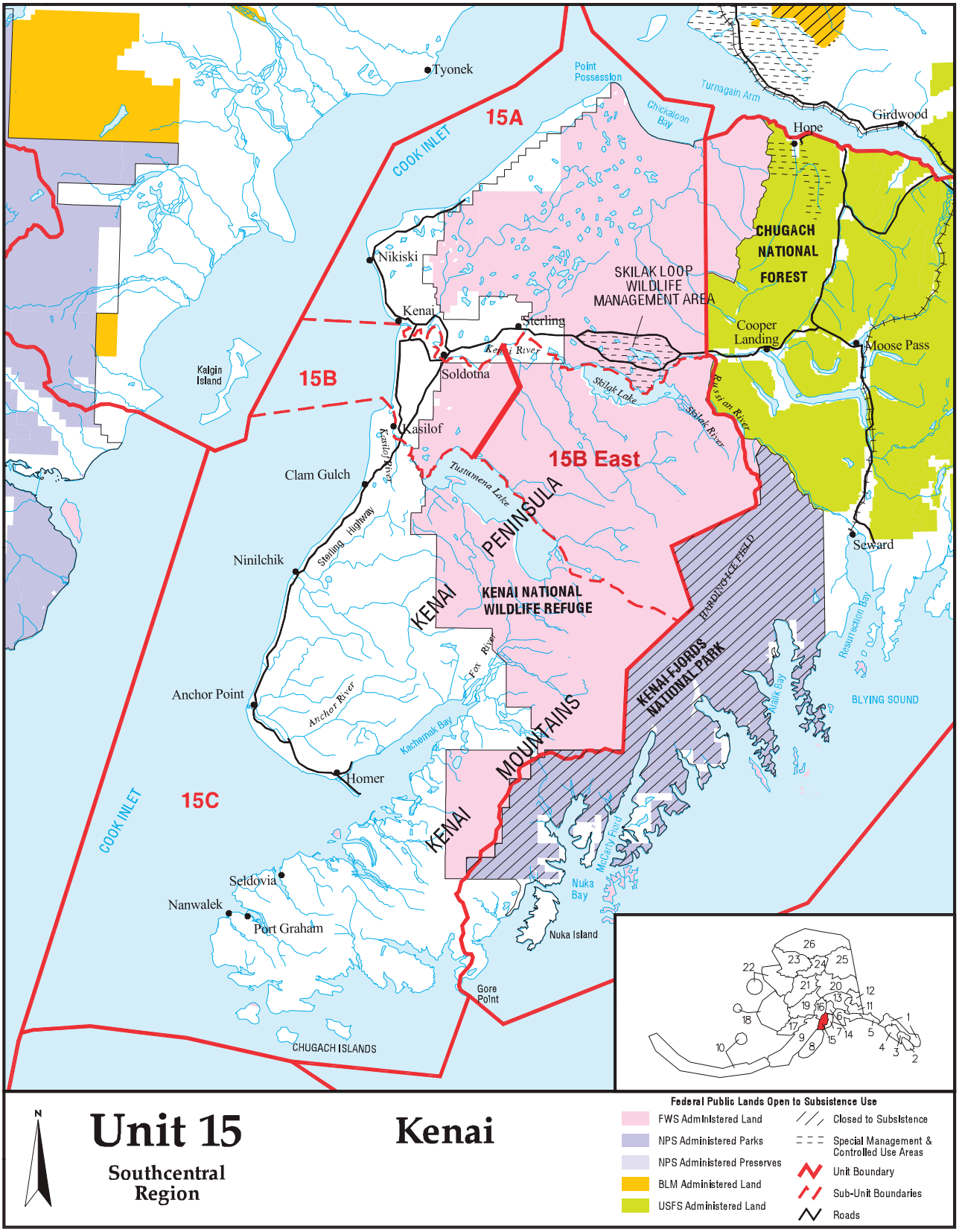

Tyonek
Point Possession
Turnagain Arm
Chickaloon Bay
Girdwood
Hope
15A
COOK INLET
CHUGACH NATIONAL FOREST
Nikiski
SKILAK LOOP WILDLIFE MANAGEMENT AREA
Kenai
Sterling
Cooper Landing
Moose Pass
Kenai River
Soldotna
Kalgin Island
15B
Skilak Lake
Russian River
Skilak River
Kasilof
Kasilof River
15B East
Clam Gulch
Tustumena Lake
KENAI PENINSULA
Sterling Highway
Seward
Ninilchik
HARDING ICE FIELD
KENAI NATIONAL WILDLIFE REFUGE
KENAI
Fox River
Resurrection Bay
KENAI FJORDS NATIONAL PARK
Anchor Point
Anchor River
Aialik Bay
BLYING SOUND
Kachemak Bay
KENAI MOUNTAINS
Homer
15C
COOK INLET
McCarty Fjord
Seldovia
Nuka Bay
Nanwalek
Port Graham
Nuka Island
Gore Point
CHUGACH ISLANDS
N
Unit 15
Southcentral Region
Kenai
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads

Table 2. Kenai Peninsula moose road kills 2004-2011 (L. Lewis and S. Miller, pers. comm. 2011).

Year	Unit 15B	Unit 15C	Total Moose killed
2004/05	61	74	135
2005/06	51	86	137
2007/08	56	79	135
2008/09	41	40	81
2009/10	61	51	112
2010/11	65	46	111
Total	335	376	711
Average	56	67	119

Determining a pattern within Unit 15B is complicated by a lack of comparable survey data from previous years. Composition surveys were completed in both 2009/10 and 2010/11 but not within the same count areas. Prior to these recent surveys, composition surveys had not been completed since 1996/97 and not within the same count areas as those used in recent years. Anecdotal evidence suggests that population declines are occurring within Unit 15B and these population declines are being compounded by low bull:cow ratios within at least the western portion of the Unit (Miller 2011, pers. comm.).

Unit 15C

Kenai NWR has established a minimum post-hunting season sex ratio of 40-60 bulls:100 cows within the Caribou Hills portion of the unit and 25-30 bulls:100 cows within the remainder (USFWS 1996). The State's management objectives for Unit 15C are to maintain a minimum post-hunting season sex ratio of 15–20 bulls:100 cows (McDonough 2004, Selinger 2006, Selinger 2008).

The 2010/11 fall sex and age composition survey for Unit 15C revealed an extremely low bull:cow ratio of 9:100, which is much lower than the long-term bull:cow ratio of 29:100 (**Table 1**) and well below the established refuge goal. Based upon ADF&G's 2010 population estimate of 2,195 animals, the moose population in Unit 15C has decreased from the 2001 when the population was estimated to be 2,981 animals. Without action to address the imbalance in sex ratios, the moose population within Unit 15C will likely continue to decline.

Harvest History

Harvest reports in 2006 showed 2 moose harvested from 37 hunters reporting (60 permits issued). Since 2006, no other permits were issued for the Oct. 20 – Nov. 10 season. If Federal subsistence regulations continue to allow the spike-fork and 3 brow tine options for the Oct. 20 – Nov. 10 season, Federally qualified subsistence users may shift their efforts to take advantage of the more liberal harvest limit. The success rate of these hunters could increase since the opportunity under State regulations and the earlier Federal season has been removed; therefore, harvest history from the early season (Aug. 10 – Sept. 20) is reported.

Unit 15B

From 2004-2009, Federally qualified users harvested an average of 0.16 spike/fork moose and an average of 1.3 moose with 50" antlers or with 3 or more brow tines for a total of 9 moose. Spike/fork comprised less than 1% of the total harvest by these individuals (**Table 3 and 4**).

Table 3. Proportion of harvest of spike-fork moose within total harvest in Unit 15B and 15C by individuals who live in communities with customary and traditional use determination and non-federally qualified users (OSM 2011)

	Unit 15B Spike-fork harvest Aug. 10 – Sept. 20		Unit 15C Spike-fork harvest Aug. 10 – Sept. 20	
Year	**C & T residents**	**Non-federally qualified users**	**C & T residents**	**Non-federally qualified users**
2004	0	29 (78%)	28 (68%)	138 (58%)
2005	0	36 (77%)	21 (55%)	141 (59%)
2006	0	31 (82%)	29 (76%)	103 (58%)
2007	0	29 (78%)	14 (50%)	106 (59%)
2008	0	28 (93%)	17 (71%)	112 (67%)
2009	1 (50%)	24 (71%)	24 (67%)	121 (58%)

(%) represents the percentage of harvest that was a spike-fork moose within total harvest by user class

Non-Federally qualified users harvested an average of 29.5 spike/fork moose (range 24-36) and an average of 5.8 moose with antlers that were 50" or with 3 or more brow tines. Spike/fork moose comprised 80% of the harvest and 15% were moose with antlers 50" or with 3 or more brow tines with the remaining percentage being moose with unknown antler configuration (**Table 3 and 4**).

Under the current regulation of 50" or 3 or more brow tines, an average of 7.2 bulls (range 5 – 9) were harvested between 2004 and 2009; this comprised 19% (43 of 231) of the total harvest for all users (**Table 5 and Figure 2**). The proposed regulation eliminates harvesting a moose with spike/fork and 3 brow tines < 50" antlers. Using the same harvest data from 2004 to 2009, an average of 3.8 bulls (range 2 – 7) with 50" or 4 or more brow tines were harvested and comprised 10% (23 of 231) of the total harvest (**Table 5 and Figure 2**). A specific breakdown of antler configuration for medium (<50") and large bulls (>50") and associated number of brow tines is in **Table 6**.

Table 4: Proportion of harvest of 50” or 3 or more brow tine within total harvest in Unit 7-remainder and Unit 15 by individuals who live in communities with customary and traditional use determination and non-Federally qualified users (USFWS 2011)

	Unit 15B 50” or 3+ brow tine harvest Aug. 10 – Sept. 20		Unit 15C 50” or 3+ brow tine harvest Aug. 10 – Sept. 20	
Year	**C & T residents**	**Non-Federally qualified users**	**C & T residents**	**Non-Federally qualified users**
2004	1 (100%)	5 (14%)	1 (100%)	5 (14%)
2005	0	9 (19%)	0	9 (19%)
2006	1 (100%)	5 (13%)	1 (100%)	5 (13%)
2007	2 (100%)	7 (19%)	2 (100%)	7 (19%)
2008	3 (100%)	2 (6%)	3 (100%)	2 (6%)
2009	1 (50%)	7 (21%)	1 (50%)	7 (21%)

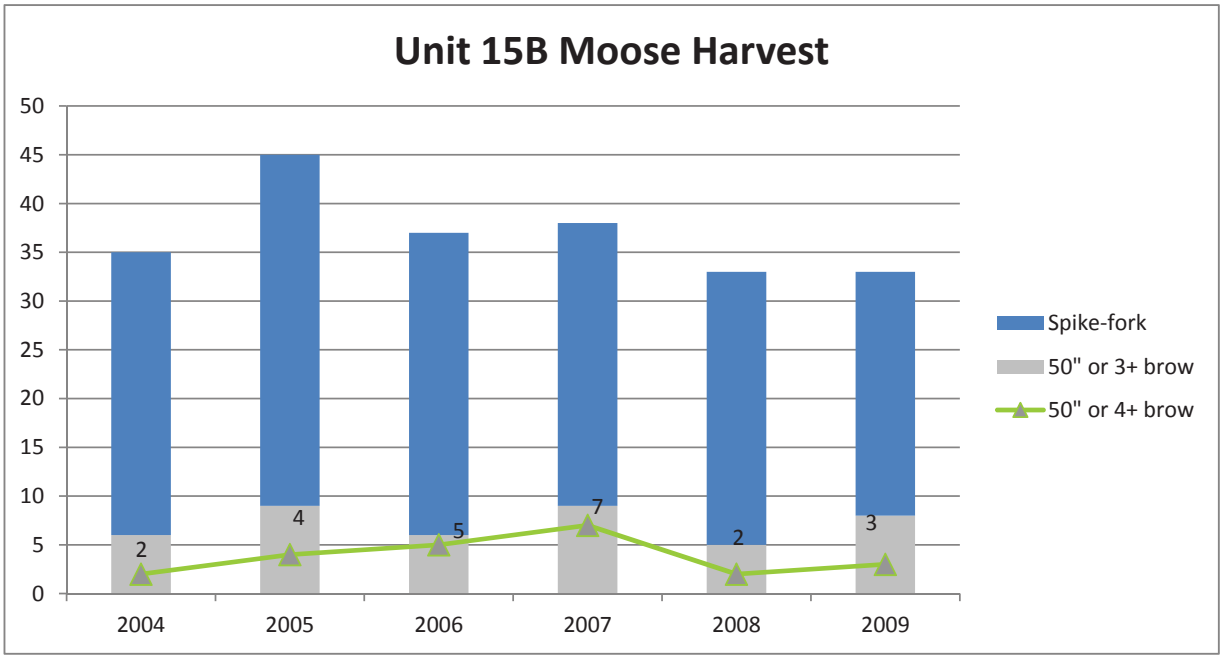


Figure 2. Unit 15B moose harvest by all users with current spike/fork, >50” or 3+ brow tine antler restriction and proposed 50” or 4+ brow tine harvest restrictions.

Table 5. Total harvest by antler class from all users 2004-2009 (S. Miller, pers. comm. 2011 and USFWS 2011).

Unit 7	2004	2005	2006	2007	2008	2009	Total	Average
Spike-fork	14	8	12	6	12	5	57	9.5
50" or ≥ 3 brow	17	27	16	12	17	21	110	18.3
50" or ≥ 4 brow	**12**	**15**	**14**	**8**	**12**	**14**	**75**	**12.5**
Total (including unk antler)	32	38	30	18	32	27	177	29.5
% of spike/fork	44%	21%	40%	33%	38%	19%	32%	
% of 50" **or** ≥ 3 brow	53%	71%	53%	67%	38%	78%	62%	
% of 50" **or** ≥ 4 brow*	38%	40%	47%	44%	38%	52%	42%	
Unit 15A	2004	2005	2006	2007	2008	2009	Total	Average
Spike-fork	73	82	85	76	85	67	468	78
50" or ≥ 3 brow	50	30	37	28	23	39	207	34.5
50" or ≥ 4 brow	**32**	**18**	**27**	**16**	**16**	**22**	**131**	**21.8**
Total (including unk antler)	131	123	130	111	113	110	718	119.7
% of spike-fork	56%	67%	65%	68%	75%	61%	65%	
% of 50" or ≥ 3 brow	38%	24%	28%	25%	20%	35%	29%	
% of 50" or ≥ 4 brow*	24%	15%	21%	14%	14%	20%	18%	
Unit 15B	2004	2005	2006	2007	2008	2009	Total	Average
Spike-fork	29	36	31	29	28	25	178	29.7
50" or ≥ 3 brow	6	9	6	9	5	8	43	7.2
50" or ≥ 4 brow	**2**	**4**	**5**	**7**	**2**	**3**	**23**	**3.8**
Total (including unk antler)	37	47	39	39	33	36	231	38.5
% spike-fork	78%	77%	79%	74%	85%	66%	77%	
% of 50" or ≥ 3 brow	16%	19%	15%	23%	15%	22%	19%	
% of 50" or ≥ 4 brow*	5%	9%	13%	18%	6%	8%	10%	
Unit 15C	2004	2005	2006	2007	2008	2009	Total	Average
Spike-fork	166	162	132	121	129	145	855	142.5
50" or ≥ 3 brow	98	101	65	76	55	89	484	80.7
50" or ≥ 4 brow	**53**	**61**	**43**	**52**	**31**	**64**	**304**	**50.7**
Total (including unk antler)	278	279	215	208	192	246	1418	236.3
% spike-fork	60%	58%	61%	58%	67%	59%	60%	
% of 50" or ≥ 3 brow	35%	36%	30%	37%	29%	36%	34%	
% of 50" or ≥ 4 brow*	19%	22%	20%	25%	16%	26%	21%	

* The percentage of total harvest of 50” or ≥ 4 brow tine is nested within the percentage of 50” or ≥ 3 brow tine; therefore, the total percentage between % of spike-fork, % of 50” or ≥ 3 brow, and the % of 50” or ≥ 4 brow is greater than 100%.

Table 6. Total harvest by antler class for medium and large bulls from all users 2004-2009 (S. Miller, pers. comm. 2011 and USFWS 2011).

	Medium Bulls (<50")			Large Bulls (>50")					Legal harvest under proposed 50" or ≥ 4 brow tine	% of total harvest
	# of Brow Tines			# of Brow Tines						
Year	3	4	Total	1	2	3	4+	T		
2004	72	18	90	1	20	38	22	81	99	20.6%
2005	69	12	81	2	32	40	12	86	98	19.9%
2006	35	10	45	0	40	27	12	79	89	21.3%
2007	42	6	48	2	35	28	12	77	83	22.0%
2008	39	6	45	2	23	20	10	55	61	16.4%
2009	54	7	61	2	41	37	16	96	103	24.5%

Unit 15C

In Unit 15C, Federally qualified users harvested an average of 22 spike/fork moose and an average of 11 moose with 50" antlers or 3 or more brow tines for a total of 199 bull moose between 2004 – 2009. Spike/fork moose comprised 67% and moose with 50" or 3 or more brow tines comprised 33% of the total harvest by these individuals (**Table 3 and 4**).

Non-Federally qualified users harvested an average of 120 spike/fork moose and an average of 70 moose with antler 50" or with 3 or more brow tines. Spike/fork moose comprised 59% of the harvest and 34% were moose with antlers 50" or with 3 or more brow tines with the remaining percentage being moose with unknown antler configuration (**Table 3 and 4**).

Under the current regulation of 50" or 3 or more brow tines, an average of 80.7 bulls (range 55 – 101) were harvested between 2004 and 2009 which comprised 34% (484 of 1,418) of the total harvest for all users (**Table 5 and Figure 3**). The proposed regulation eliminates harvesting a moose with spike/fork and 3 brow tines < 50" antlers. Using the same harvest data from 2004 to 2009, an average of 50.7 bulls (range 31 – 64) with 50" or 4 or more brow tines were harvested and comprised 21% (304 of 1,418) of the total harvest (**Table 5 and Figure 3**).

The impact of various harvest scenarios on the bull:cow ratio within 15C, specifically, was analyzed by ADF&G (McDonough pers. comm. 2011, **Figure** 4). Spike/fork moose comprised the predominate antler type that was harvested in Unit 15 and the harvest restrictions implemented by the Board of Game in 2011 including requiring 4 brow tine antlers for harvest, have the highest probability of achieving management objectives, short of a total season closure, during the 2-year management period (**Figure 4**). Comparable results could be expected in the remainder of Unit 15. Child et al. (2010) found that the spike/fork regulation in British Columbia exposed 16% of all bulls (n = 1,886) to harvest. By social class, 46.2% were yearlings, 6% were teens (2.5 – 3.5 years) and 2.4% of prime bulls (4.5 – 11.5 years). On the Kenai Peninsula from 2004-2009, the majority of harvest (59%) within Unit 15 has been spike/fork bulls. A specific breakdown of antler configuration for medium (<50") and large bulls (>50") and associated number of brow tines is in **Table 7**.

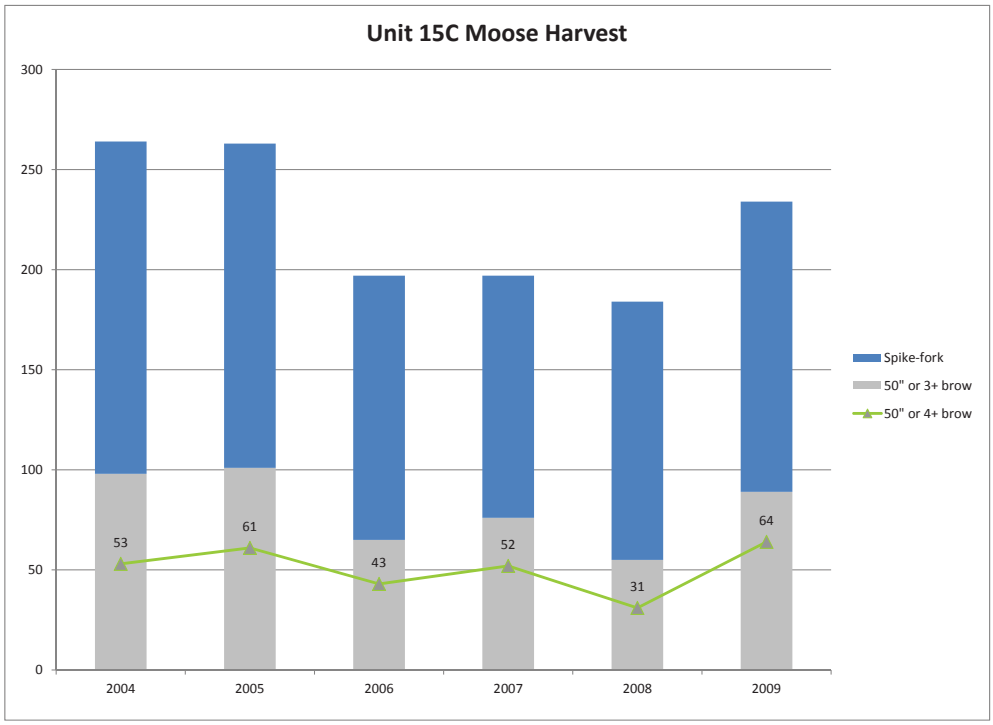


Figure 3. Unit 15C moose harvest by all users with current spike/fork, >50" or 3+ brow tine antler restriction and proposed 50" or 4+ brow tine harvest restrictions.

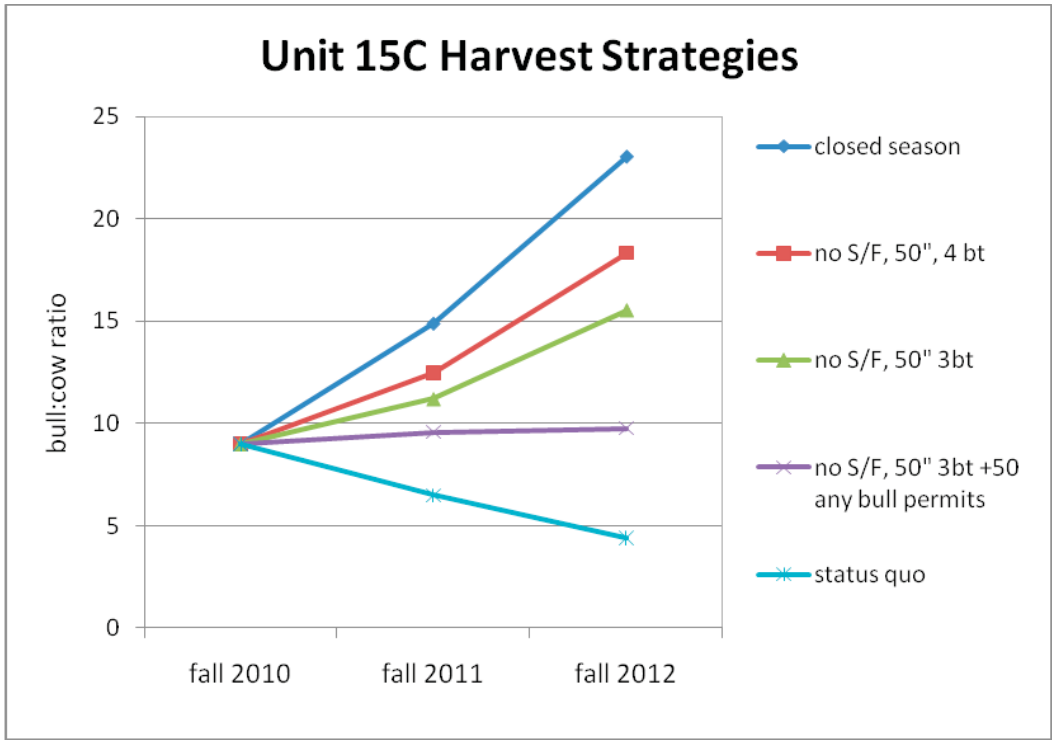


Figure 4. Anticipated Impacts of Harvest Restrictions within Unit 15C

Table 7. The population of communities in the customary and traditional use determination for moose in Unit 15[a], 1990, 2000, and 2010 (ADCRA 2011).

	1990	2000		2010		2000-2010 Percentage Change in Population
Community	**Population**	**Population**	**Number of Households**	**Population**	**Number of Households**	
Nanwalek	158	177	45	254	55	44%
Ninilchik[b]	765	1,261	516	1,476	682	17%
Port Graham	166	171	70	177	79	4%
Seldovia	316	286	134	255	121	-11%
Cooper Landing	243	369	162	289	161	-22%
Totals	1,648	2,264	927	2,451	1,098	8%

[a]All of Unit 15: Ninilchik, Seldovia, Nanwalek, and Port Graham and Cooper Landing for Unit 15B.
[b] Ninilchik includes Happy Valley Census Designated Place (CDP).

Current Events Involving Species

In 2011, the BOG closed nonresident hunting for the general season bull hunts in Units 15A and 15C for regulatory year 2011/2012. In addition, the BOG changed the antler restrictions from 3 brow tines to 4 brow tines and removed the spike-fork option to harvest a moose in Unit 15. Antlers are required to be sealed by an authorized representative in Homer, Soldotna or Anchorage within ten days of harvest within Unit 15. In March 2011, the Kenai NWR Manager discussed the potential changes in State regulations with the Southcentral Regional Advisory Council (Council). Because this discussion occurred prior to the BOG regulatory changes, the Kenai NWR manager also mentioned the possibility of submitting a proposal or special action in response to the State's action. The Council briefly discussed the State's proposed changes, and differing opinions were expressed (**Appendix A**).

Changing antler restrictions is meant to be a short-term solution to allow the increase in bull:cow ratios. Eliminating the spike-fork option will allow bull:cow ratios to recover to management objectives more quickly thereby addressing conservation concerns. In addition, increasing the brow tine requirement to 4 brow tines will limit the number of large bulls harvested in the area while still allowing for a harvest opportunity of bulls with 50" antlers regardless of the number of brow tines and bulls with 4 brow tines with less than 50" antlers. Regulations can be changed after the 2011 season by temporary Special Action if the bull:cow ratios have rebounded. Sealing the antlers will allow managers to determine if the decline in bull:cow ratios was due to the ineffectiveness of the spike/fork/50"/3-brow tine regulation or if illegal harvest was a contributing factor. Currently there are no check stations for moose harvest on the Kenai Peninsula and the ability of law enforcement to monitor the legal harvest is minimal without requiring hunters to comply with a sealing requirement or a check station.

The Kenai NWR submitted a Special Action in April 2011 to align with the State's regulatory changes. As noted above, on July 19, 2011, the Federal Subsistence Board adopted WSA11-02 to align with State regulations to change the antler restrictions from 3 brow tines to 4 brow tines and removed the spike-fork option to harvest a moose in Units 7 and 15 to address conservation concerns in the shortest timeframe. Antlers are required to be sealed within ten days of harvest by an authorized representative. This regulatory change is in effect only through September 20, 2011.

Other Alternatives Considered

Maintaining the current Federal regulations regarding antler restrictions despite changes to State antler regulations

The proposed changes in antler restrictions are designed to be a short-term (2 years) management strategy to allow the increase in bull:cow ratios. If Federal subsistence regulations continue to allow the spike-fork and 3 brow tine moose to be harvested, Federal users who have been harvesting under State regulations may choose to hunt under the less restrictive Federal moose regulations. This would minimize expected conservation gains from the new State harvest strategy and adversely impact the productivity of the moose population. Maintaining the current Federal regulations to determine whether there will be an increase in the number of Federal permits used for the first year could delay the benefits of the new State harvest strategy and negatively impact Federally qualified users in the future.

Establishing a quota for spike/fork bulls or bulls with 50" or 3 brow tines for the Federal season

Quotas have been established for moose in other Units throughout Alaska. Typically, if the herd growth rate is approximately 10% in a given year, the harvest objective for that hunting season is 2-3% of the herd. Management plans that establish biological thresholds (e.g., herd size, sex ratio, cow-calf ratio) are used to determine herd stability before a harvest quota is identified. No recent population estimates are available for Unit 7-remainder, and population estimates and bull:cow ratios for Units 15A and 15C have decreased to very low ratios. While there has not been a recent population estimate in Unit 15B, the current bull:cow ratio is 33 bulls:100 cows which is below the Federal management goal of 40-60 bulls:100 cows and calves were estimated to comprise 6% of the population. The Federal Subsistence Board provides for a subsistence priority on Federal public lands (36 CFR 242.10 (d)(6) and 50 CFR 100.10(d)(6)); they do not establish any quantitative measurement of the subsistence resources needed for subsistence harvest. The authority to manage the hunt would be granted with a letter of delegation from the Federal Subsistence Board to the Federal manager. Under 36 CFR 242.10 (d)(6) and 50 CFR 100.10 (d)(6) the Federal Subsistence Board can delegate authority to the Federal manager to modify or restrict harvest limits, season dates, and methods and means. Although a quota system could be used, it would be difficult to manage the hunt in-season as the quota numbers would be relatively low. If there were a large number of hunters in the field, it would be difficult to close the hunt in a timely manner and therefore avoid overharvest; this would adversely impact the productivity of the moose population. Should a quota system be implemented, timely harvest reporting would be critical.

Eliminate spike/fork antler restriction but maintain the 50" or 3 brow tine antler restriction.

The change in antler restrictions is meant to be a short-term solution of approximately two years to allow the increase in bull:cow ratios in the shortest timeframe. Skewed age class ratios between mature and submature bulls may result in reduced genetic variability or fewer adult females conceiving during the first estrous cycle due to their hesitation to mate with young bulls (Hundertmark and Bowyer 1998, Bowyer et al. 2002). Eliminating the spike-fork option will allow bull:cow ratios to recover to management objectives more quickly thereby addressing conservation concerns. In addition, increasing the brow tine requirement to 4 brow tines will limit the number of large bulls harvested in the area while still allowing for a harvest opportunity of bulls with 50" antlers regardless of the number of brow tines and bulls with 4 brow tines with less than 50" antlers. ADF&G has a drawing hunt for Unit 15B East and has maintained the 50" or 3-brow tine antler restriction for 50 drawing permits from Sept. 1 to Sept 30. These drawing permits are available to both Federally qualified users and non-Federally qualified users. The Federal Subsistence Board adopted WSA11-02 to align with State regulations to change the antler

restrictions from 3 brow tines to 4 brow tines and removed the spike-fork option to harvest a moose in Units 7 and 15 to address conservation concerns in the shortest timeframe.

Prioritize among Federally qualified users

An alternative to consider is to prioritize between Federally qualified rural, based on a Section 804 of ANILCA analysis. Such an analysis could help to select a smaller pool of users in the event that the moose population cannot withstand harvest by all Federally qualified users.

Section 804 Analysis

An analysis based on Section 804 of ANILCA shall be conducted whenever a proposal to change Federal regulations requests a prioritization for use of a subsistence resource among rural residents having customary and traditional use of that resource. In this case, such an analysis was developed because of the small harvestable surplus of moose in Unit 15B and 15C and the number of Federally qualified rural residents eligible to hunt moose in Unit 15B and 15C.

In 2011, the population of all of those eligible to harvest moose in Unit 15 B and 15C is approximately 2,451 (ADCRA 2011; **Table 7**). Ninilchik[1], Nanwalek, Port Graham, and Seldovia have a positive customary and traditional use determination for moose in Unit 15B and 15C (and also Unit 15A); Cooper Landing has a positive customary and traditional use determination for Unit 15B (and also Unit 15A), but not for Unit 15C.

Section 804 of ANILCA provides a subsistence priority for the taking of fish and wildlife on Federally administered lands and waters. A subsistence priority is implemented through appropriate limitations whenever it is necessary to restrict the taking of populations of fish and wildlife on these lands for subsistence uses in order to protect the continued viability of fish and wildlife populations, or to continue such uses. These limitations are based on the application of three criteria: 1) customary and direct dependence upon the populations as the mainstay of livelihood; 2) local residency; and 3) the availability of alternative resources. The following section addresses these criteria as they relate to rural residents with a positive customary and traditional use determination for moose in Unit 15B and 15C.

1. Customary and Direct Dependence upon the Populations as a Mainstay of Livelihood

As noted above, the communities under consideration for this Section 804 analysis are those with positive customary and traditional use determinations in Unit 15B, and 15C, which includes Ninilchik, Nanwalek, Port Graham, Seldovia, and for Unit 15B, Cooper Landing.

Moose in Unit 15B and 15C are an important subsistence resource to the residents of Cooper Landing, Ninilchik, Nanwalek, Port Graham, and Seldovia. Harvests vary according to the location of the communities and population size. Reported harvests in Units 15B and 15C by Federally qualified subsistence users are discussed above in the harvest history section, and reflected in Tables 4-7 above and Tables 9 and 10. It should be noted that both the Federal and ADFG harvest ticket systems account for reported harvest and may not reflect actual harvest, especially for some rural areas of the state where compliance with the ADFG harvest ticket system varies (cf. Andersen and Alexander 1992). Household surveys have been found to be a more accurate mechanism for assessing the actual harvests of large wildlife species. When available, this information is provided below.

[1] Ninilchik includes the Census Designated Place of Happy Valley.

Cooper Landing: Cooper Landing has a population of 289 (ADCRA 2011; **Table 7**), is located along the Sterling Highway in Unit 7, and connected by the Sterling Highway to Unit 15A and 15B (**Unit 7 and 15 maps**). In a household survey conducted in Cooper Landing from August 1990 through July 1991, Seitz et al. (1992) found that moose were the most widely used land mammal. Forty-two percent of the households used moose, 28 percent hunted moose, and 10 percent harvested moose. In 1990, the estimated community harvest of moose was 10 animals, or 19 pounds of meat per capita.

Between 1985 and 2009, the cumulative reported harvest of moose in Unit 15B by Cooper Landing residents' was 7 moose, representing 5% of the community's total harvest statewide (**Tables 8 and 9;** USFWS 2011). From 2004 to 2009, Cooper Landing residents have been issued an average of 4 Federal and 4 State permits a year for moose in Unit 15, with harvests of an average of 1 and 2 moose respectively in Unit 15 (**Table 10**). Subsistence use area mapping conducted in 1981 by ADF&G showed that the moose harvest moose area from 1972 to 1982 for Cooper Landing included Unit 7, Unit 15A and 15B (USFWS 1993:Map VIII-1). The Federal Subsistence Board recognized residents of Cooper Landing's customary and traditional use of moose in Unit 15A and 15B in 2010. (Cooper Landing did not request a customary and traditional use determination in Unit 15C.)

Table 8. The reported harvest of moose In Unit15B and 15C by communities included in the customary and traditional use determination, cumulative 1985-2009 (FWS 2011).

		State Permits		Federal Permits		Any Permit	
Community	**Unit of Residence**	**Number of hunters**	**Number of moose harvested**	**Number of hunters**	**Number of moose harvested**	**Number of hunters**	**Number of moose harvested**
UNIT 15B							
Cooper Landing	7	43	7	4	0	47	7
Nanwalek	15C	0	0	1	0	1	0
Ninilchik	15C	70	12	117	15	187	27
Port Graham	15C	0	0	0	0	0	0
Seldovia	15C	8	2	36	7	44	9
UNIT 15C							
Nanwalek	15C	64	15	0	0	64	15
Ninilchik	15C	3,285	730	128	24	3,413	754
Port Graham	15C	57	14	0	0	57	14
Seldovia	15C	365	48	6	1	371	49
TOTAL		4,776	957	388	54	5,164	1,011

Ninilchik: Ninilchik has a population of 1,476 (ADCRA 2011; **Table 7**) and is located along the Sterling Highway in Unit 15C (**Unit 15 map**). Moose is the most widely used land mammal by residents of Ninilchik, comprising 81% of Ninilchik's large mammal harvest (ADF&G 2011). Ninilchik residents are the primarily harvesters of moose in Unit 15C with 754 total moose reported harvested between 1985 and 2009. Of Ninilchik's total harvest during this time period, 75% (754) was from Unit 15C and 3% (27) from Unit 15B (**Table 9**). Of those communities with a positive customary and traditional use determination in Unit 15, Ninilchik residents also had the highest average of both State and Federal permits issued in Unit 15, with an average of 153 State permits and 82 Federal permits issued from 2004 to 2009 and 30 and 6 harvested (**Table 10**). Ninilchik residents also harvested a total of 217

Table 9. The reported harvest of moose in Unit 15, both State and Federal harvests, compared to the reported harvest of moose statewide by communities included in the customary and traditional use determination, cumulative 1985-2009 (FWS 2011).

Community	Unit of Residence	Number of hunters using	Number of moose harvested	Number of hunters	Number of moose harvested	Percentage of hunters using subunit	Percentage of moose harvested in subunit
		UNIT 15A		**STATEWIDE**		**UNIT 15A**	
Cooper Landing[1]	7	67	8	1,607	143	4%	6%
Nanwalek	15C	1	0	100	15	1%	0%
Ninilchik	15C	112	11	7,766	1,009	1%	1%
Port Graham	15C	2	0	113	15	2%	0%
Seldovia	15C	76	15	1,522	212	5%	7%
		UNIT 15B		**STATEWIDE**		**UNIT 15B**	
Cooper Landing	7	47	7	1,607	143	3%	5%
Nanwalek	15C	1	0	100	15	1%	0%
Ninilchik	15C	187	27	7,766	1,009	2%	3%
Port Graham	15C	0	0	113	15	0%	0%
Seldovia	15C	44	9	1,522	212	3%	4%
		UNIT 15C		**STATEWIDE**		**UNIT 15C**	
Nanwalek	15C	64	15	100	15	64%	100%
Ninilchik	15C	3,413	754	7,766	1,009	44%	75%
Port Graham	15C	57	14	113	15	50%	93%
Seldovia	15C	371	49	1,522	212	24%	23%
		UNITS 15 TOTAL		**STATEWIDE**		**UNITS 15 TOTAL**	
Cooper Landing	7	114	15	1,607	143	7%	10%
Nanwalek	15C	2	0	100	15	2%	0%
Ninilchik	15C	3,712	792	7,766	1,009	48%	78%
Port Graham	15C	59	14	113	15	52%	93%
Seldovia	15C	491	73	1,522	212	32%	34%

[1] Cooper Landing has a positive customary and traditional use determination for Unit 15A and 15B, but not for Unit 15C.

moose outside of Unit 15 during this time period (**Table 9**; USFWS 2011). Mapping of Ninilchik's large mammal harvest area includes all Unit 15 (NTC 1994).

Nanwalek: Nanwalek (previously named English Bay) has a population of 254 (ADCRA 2011; **Table 7**). Located on the southernmost edge of Kachemak Bay where it converges with Cook Inlet in proximity to the Gulf of Alaska in Unit 15C (**Unit 15 map**), Nanwalek is five miles from Port Graham. Nanwalek is accessible only by air or boat. Moose hunting by Nanwalek residents has occurred primarily in the vicinity of the village (Stanek 1985:177). When moose hunting occurred elsewhere, it was in conjunction with other subsistence harvesting activities such as bear and waterfowl hunting,

Table 10. Average permits issued for individuals with customary and traditional use determination in Unit 15 from 2004 to 2009 (USFWS 2011).

State Permits - Unit 15			
Community	**Issued**	**Hunted**	**Kill**
Nanwalek	1	1	0
Port Graham	**4**	**4**	**2**
Seldovia	8	8	2
Cooper Landing	**4**	**4**	**1**
Ninilchik	153	153	30
Total	**170**	**170**	**35**

Federal Permits - Unit 15			
Community *	**Issued**	**Hunted**	**Kill**
Seldovia	9	7	1
Cooper Landing	4	3	1
Ninilchik	82	53	6
Total	**95**	**63**	**8**
*** No Federal permits have been issued to residents of Port Graham or Nanwalek**			

State Permits - Statewide			
Community	**Issued**	**Hunted**	**Kill**
Nanwalek	**2**	**1**	**0**
Port Graham	**6**	**4**	**2**
Seldovia	**35**	**23**	**7**
Cooper Landing	**58**	**28**	**5**
Ninilchik	**350**	**194**	**43**
Total	**451**	**250**	**57**

berry picking, and fishing. The combining of multiple activities increased the overall efficiency of the hunting trip (ADF&G 1992:1). Between 1985 and 2009, the total reported harvest of moose by Nanwalek residents has occurred entirely within Unit 15C and only once have hunters received permits to harvest moose in Unit 15B (see **Table 9**). Nanwalek residents have not applied for a Federal permit to harvest moose in Unit 15 from 2004 to 2009 and have only once applied for a State permit resulting in no harvest (**Table 10**). From 2004 to 2009, Nanwalek residents were not issued Federal permits to harvest moose in Unit 15. During the same time period, an average of 1 State permit has been issued with an average of no moose harvested (**Table 10**). Consistent with the harvest reporting, subsistence use area conducted in 1981 by ADF&G showed that the moose harvest moose area from 1980 to 1992 for Nanwalek was in Unit 15C, in the area immediately surrounding the Nanwalek and Port Graham (USFWS 1993:Map II-2).

Port Graham: Port Graham has a population of 177 (ADCRA 2011; **Table 7**) and, like Nanwalek, is located on the southernmost edge of Kachemak Bay where it converges with Cook Inlet

in proximity to the Gulf of Alaska in Unit 15C (**Unit 15 map**). Port Graham is accessible only by air or boat. Moose hunting by Port Graham residents has occurred primarily in the vicinity of the village (Stanek 1985:177). From 2004 to 2009, Port Graham residents were not issued Federal permits to harvest moose in Unit 15. During the same time period, an average of 4 State permits have been issued for moose in Unit 15 with an average of 2 moose harvested (**Table 10**). Subsistence use area mapping conducted in 1981 by ADF&G showed that the moose harvest moose area from 1980 to 1992 for Nanwalek was in Unit 15C, in the area immediately surrounding the Nanwalek and Port Graham (USFWS 1993:Map II-2). Consistent with the moose harvest area map, of reported harvests, Port Graham residents harvested no moose in Units 15B between 1985 and 2009. During this same time period, one moose was harvested by a Port Graham resident outside of Unit 15 (**Tables 8 and 9;** USFWS 2011).

Seldovia: Seldovia has a population of 255 (ADCRA 2011; **Table 7**) and is located on the mouth of Seldovia Bay at the southwestern edge of Kachemak Bay (**Unit 15 map**) in Unit 15C. Seldovia is accessible only by air or boat. Seldovia residents' moose harvests in Unit 15 are primarily in Unit 15C, but there are also reported harvests and use of Unit 15B. Between 1985 and 2009, Seldovia residents harvested a total of 9 moose in Unit 15B, and 49 in Unit 15C and 44 hunted (but weren't successful) in Unit 15B (**Table 8;** USFWS 2011). During this same time period, Seldovia residents also harvested a total of 139 moose outside of Unit 15. From 2004 to 2009, Seldovia residents have been issued an average of 9 Federal and 8 State permits a year with harvests of an average of 1 and 2 moose respectively in Unit 15 (**Table 10**). Mapping of Seldovia moose harvest area was not available, but Reed (1985) indicated that the primary moose harvest area in 1985 was in the vicinity of Seldovia.

2. Local Residency

With the exception of Cooper Landing, all of the communities under consideration in this Section 804 analysis are within Unit 15C. Cooper Landing is located in Unit 7, but is situated approximately 5 miles from the boundary between Unit 7 and Unit 15A. Cooper Landing is accessible by road to portions of Unit 15 (**Unit 15 map**). There are large portions of Unit 15 that are not road accessible (see Unit 15 map). There are no Federally qualified rural communities in Unit 15B. Ninilchik is accessible by road to portions of Unit 15. Seldovia is not accessible by road, but the State ferry runs three times a week year-round between Seldovia and Homer, which is road connected to Unit 15, and during the summer months there are private passenger ferries and water taxis that run multiple times a day between Seldovia and Homer. Nanwalek and Port Graham are within Unit 15C, but are not accessible by road to Unit 15B. In addition, there are no passenger boat services, including the State ferry, to and from Nanwalek and Port Graham. All transportation in and out of Nanwalek and Port Graham is by private boat or air.

3. Availability of Alternative Resources

All of the communities addressed in this Section 804 analysis harvest subsistence resources and rely on the resources available to them (USFWS 1993). As in all of rural Alaska, resources vary according to geographic location of the community and species availability. Subsistence economies are generally flexible and opportunistic: if some resources are not available during one hunting season, then others are sought. All of the communities under consideration in this analysis have a history of harvesting land mammals other than moose, including: caribou, goat, sheep, black and brown bear. As noted above, however, moose is the most widely used large land mammal by all of these communities (Fall 1992, NTC 1994, Reed 1985, Seitz et al. 1992, Stanek 1985, USFWS 1993).

Cooper Landing residents use alternative places to harvest moose outside of Unit 15B, as evidenced by the fact that only 5% of their total moose harvest between1985 and 2009 occurred in Unit 15B (**Tables 8 and 9**).

Ninilchik residents are more dependent on harvesting moose in Unit 15, as evidenced by the fact that 78% of their total harvest occurred in Unit 15 (3% in Unit 15B and 75% in Unit 15C) during the period 1985-2009. Only 22% of Ninilchik residents harvest moose outside of Unit 15 during this same period (**Tables 8 and 9**).

Seldovia residents also appear to have alternative areas to harvest moose outside of Unit 15B and 15C as indicated by their harvest history between 1985 and 2009: only 27% of their total harvest has been in Unit 15B or 15C—4% in Unit 15B and 23% in Unit 15C.

Of the affected communities in this analysis, Port Graham and Nanwalek are the only communities that do not report harvesting moose outside of their subunit, with one exception, thus it could be that there are few or no other alternatives for harvesting moose outside of Unit 15C for these communities. This is likely because of the distance and the high cost of travel to other parts of the state or to Unit 15B.

Summary of Section 804 Analysis

Unit 15B: Cooper Landing, Ninilchik, and Seldovia demonstrate the highest dependency on moose harvested in Unit 15B and the highest level of moose harvest effort among communities that attempted to harvest moose and harvested moose in Unit 15B between 1985 and 2009. In addition to the number of hunters using Unit 15B, Cooper Landing and Ninilchik's moose harvest areas encompass Unit 15B. Cooper Landing and Ninilchik are the closest to Unit 15B. Nanwalek and Port Graham did not report harvests in Unit15B (with one exception) and their use areas are not within Unit 15B. If it was necessary to further restrict amongst Federally qualified subsistence users, moose harvests could be closed to all users except residents of Cooper Landing, Ninilchik, and Seldovia.

Unit 15C: Ninilchik, Seldovia, Port Graham, and Nanwalek demonstrate the highest dependency on moose harvested in Unit 15C and the highest level of moose harvest effort among communities that attempted to harvest moose in Unit 15C between 1985 and 2009. These communities are located within Unit 15C and their moose harvest use areas are within Unit 15C. For these 4 communities, the percentage of the total reported harvests between 1985 and 2009 in Unit 15C have been 100%, 93%, 75%, and 23% respectively for Nanwalek, Port Graham, Ninilchik, and Seldovia. Harvest effort indicates a similar pattern. Cooper Landing residents do not have a customary and traditional use determination for Unit 15C. If Federal public lands were closed to non-Federally qualified users in Unit 15C, and it was necessary to further restrict amongst Federally qualified subsistence users, moose harvests could be closed to all users except residents of Ninilchik, Seldovia, Port Graham, and Nanwalek.

Adopting this alternative is not recommended because other harvest management strategies would provide an increase in bull:cow ratios in the shortest timeframe for the moose population in Unit 15B and 15C.

Effects of the Special Action

If this Emergency Special Action is adopted, the removal of the spike-fork option would likely reduce Federal harvest. Increasing the brow tine requirement to 4 brow tines will limit the amount of large bulls harvested in the area to maintain a large bull category to hopefully rebound in future years. Currently, there is a decline in the bull:cow ratio and the predominate harvest within Unit 15 is a spike-fork moose.

Eliminating the spike-fork harvest within Units 15B and 15C will allow for increased recruitment for yearling bulls into the population to establish a higher bull:cow ratio over time. In addition, increasing the brow tine requirement to 4 brow tines would limit the number of large bulls harvested in the area to maintain a large bull category to hopefully rebound in future years. Bull moose with 50" antlers, regardless of the number of brow tines, will still be legal to harvest and provide an opportunity for Federally qualified subsistence users.

If this Special Action is not adopted, the Federal harvest limit for moose would allow for the harvest of spike-fork moose, which has been eliminated from the State harvest limit. The continued harvest of yearling bulls will compromise the increase in recruitment needed to reach bull:cow ratio objectives and will negatively impact the moose population in Units 15B and 15C. Approximately 2,451 people live in the five communities that have a positive customary and traditional use determination for moose in Units 15B and 15C (**Table 7**). At present most of these individuals choose to harvest moose under State regulations. Due to the fact that the State regulations were recently changed to be more restrictive than Federal Subsistence regulations it is expected that the number of Federally qualified subsistence users that would choose to hunt on Federal public lands with a Federal permit will increase. From 1990 to 2010, the populations in the communities with customary and traditional use in Unit 15 have increased 10% (**Table 7**). A spike-fork opportunity would likely result in an increase in the number of individuals from the communities hunt moose in Unit 15 (**Table 10**). Trends in the harvest of spike-fork moose by Federally qualified subsistence users has been steady (**Table 3**). However, it is expected that the success rate of these hunters would increase since the opportunity under State regulations has been removed and thereby minimize any conservation gains from this short-term management strategy.

The spike-fork, 50-inch or three brow tines on at least one antler restrictions are in place to provide adequate protection from over-harvest of breeding age bulls. As noted in the "Regulatory History" section of this analysis, there is a record on this issue from 1995–2001 from the Council and Board with review by District Court and Ninth Circuit Court of Appeals. The Ninth Circuit Court of Appeals held that "In deciding to apply the spike-fork/50 inch antler restriction to subsistence hunters, the Board took into account biological data suggesting that, despite the recovery in bull numbers, allowing subsistence users to hunt all bulls would reverse the gains and jeopardize subsistence opportunities over the long term." The Federal Subsistence Board's interpretation of the term "priority" as defined by ANILCA was reasonable and meant to balance the competing aims of subsistence use, conservation, and recreation; while at the same time providing subsistence hunters with a meaningful opportunity. The Ninth Circuit Court of Appeals held that "…the Board considered the relevant factors in concluding that the restrictions on subsistence users are necessary to protect the continued viability of the bull moose population in GMU 15…"

Harvest under State regulations is predominately by harvest ticket and reliant upon hunter reports to determine the number of hunters and actual harvest. Harvest under Federal regulations is by Federal registration permit which gives managers an understanding of the number of hunters, but is still reliant upon hunter reports to determine actual harvest. Requiring the sealing of antlers by State or Federal representatives within 10 days of harvest will allow for more accurate tracking of legal harvest to determine if the antler restrictions are working to increase bull:cow ratios or if illegal harvest is the limiting factor for moose on the Kenai Peninsula.

OSM PRELIMINARY CONCLUSION

Support Special Action WSA11-03

Justification

While the current levels of moose harvest under Federal subsistence regulations are low during the Oct. 20 – Nov. 10 season, maintaining the spike-fork, 50-inch antlers or antlers with 3 or more brow tines during this season, could lead to a substantial shift in Federally qualified users applying for permits and harvesting a moose for the late season. Aligning the State and Federal regulations by removing the spike-fork option and increasing the brow tine requirement to 4 brow tines will limit the number of large bulls harvested in the area while still allowing for a harvest opportunity of bulls with 50" antlers regardless of the number of brow tines. This change in antler restrictions is meant to be a short-term solution of approximately two years to allow the increase in bull:cow ratios in the shortest timeframe to address conservation concerns. Requiring the sealing of antlers will allow for more accurate tracking of legal harvest to effectively manage the moose population on the Kenai Peninsula.

LITERATURE CITED

ADF&G. 2008. The Alaska Board of Game Spring 2008 Meeting, February 29-March 10, 2008. Proposal 127, page 117. Fairbanks, AK.

ADF&G. 2007. Harvest reports. Internet: http://www.wildlife.alaska.gov/index.cfm.

Banks, E.E., T.N. Bailey, and M.F. Portner. 1989. Survival rates of adult female moose on the Kenai Peninsula, Alaska. Journal of Wildlife Management 53:557-563.

Berg, E.E., J.D. Henry, C.L. Fustier, A.D. De Volder, S.M. Matsuoka. 2006. Spruce beetle outbreaks in spruce forests on the western Kenai Peninsula, Alaska, and Luanne National Park and Reserve, Yukon Territory: relationships with summer temperature and regional differences in disturbance regimes. Forest Ecology Management 227:219-232.

Berg, E.E., K.M. Hillman, R.Dial, and A. DeRuwe. 2009. Recent woody invasion of wetlands on the Kenai Peninsula lowlands, south-central Alaska: a major regime shift after 18,000 years of wet Sphagnum-sedge peat recruitment. Canadian Journal of Forest Research 39:2033-2046.

Bishop, R.H. and R.A. Rausch. 1974. Moose population fluctuations in Alaska. 1950-1972. Natural Canadien 101:559-593.

Bowyer, R.T., K.M. Stewart, B.M. Pierce, K.J. Hundertmark, and W.C. Gassaway. 2002. Geographical variation in antler morphology of Alaskan moose: Putative effects of habitat and genetics. Alces 38: 155-165.

Bowyer, R. T, K. M. Stewart, J. G. Kie, and W. C. Gasaway. 2001. Fluctuating asymmetry in antlers of Alaskan moose: size matters. Journal of Mammalogy 82: 814-824.

Child, K.N., D.A. Aitken, R.V. Rea, R.A. Demarchi. 2010. Potential vulnerability of bull moose in Central British Columbia to three antler-based hunting regulations. Alces:46:113-121.

DLWD. 2011. Department of Labor and Workforce Development Database. Internet: http://labor.alaska.gov/research/census/home.htm .

FSB. 1996a. Transcripts of Federal Subsistence Board proceedings, May 3, 1996. Office of Subsistence Management, USFWS. Anchorage, AK.

FSB. 1996b. Transcripts of Federal Subsistence Board proceedings, July 16, 1996. Office of Subsistence Management, USFWS. Anchorage, AK.

FSB. 1996c. Transcripts of Federal Subsistence Board proceedings, August 14, 1996. Office of Subsistence Management, USFWS. Anchorage, AK.

FWS. 2001. Kenai National Wildlife Refuge Fire Management Plan. Soldotna, Alaska. 58 pages.

Hundertmark, K. J., and R. T. Bowyer. 1998. Effects of population density and selective harvest on antler phenotype in simulated moose populations. Alces 34: 375-383.

Klein, E. E.E. Berg, R. Dial. 2005. Wetland drying and succession across the Kenai Peninsula Lowlands, south-central Alaska. Canadian Journal of Forest Research 35:1931-1941.

Lieb, B. J. 2008. Harvest information system coordinator. Personal communication: phone. ADF&G. Juneau, AK.

McDonald, M.G. 2000. Unit 15A Northern Kenai Peninsula. Pages 17–18 in M.V. Hicks, ed. Management report of survey-inventory activities, 1 July 1999–30 June 2000. ADF&G Fed. Aid in Wildl. Rest. Prog. Rep. Proj. W-27-3, Study 1.0, Juneau, AK. 42 pages.

McDonough, T. 2004. Unit 15B and 15C moose management reports. Pages 209–215 and 216–223 in C. Brown, ed. Moose management report of survey and inventory activities, 1 July 2001–30 June 2003. ADF&G. Fed. Aid in Wildl. Rest. Prog. Rep. Proj. W-27-5 and W-33-1, Study 1.0, Juneau, AK. 180 pages.

McDonough, T. 2006. Unit 7 moose management reports. Pages 101–106 in P. Harper, ed. Moose management report of survey and inventory activities, 1 July 2003–30 June 2005. ADF&G, Juneau, AK.

Miller, S. 2011. Deputy Refuge Manager. Personal communication, Kenai NWR, Soldotna, AK.

Morton, J. 2007. Wildlife biologist. Personal communication. Kenai NWR, Soldotna, AK.

Oldemeyer, J.L., A.W. Franzmann, A.L. Brundage, P.D. Ameson, and A. Flynn. 1977. Browse quality and the Kenai moose population. Journal of Wildlife Management 41:533-542.

OSM. 2007. Subsistence Permit System. Internet: http://alaska.fws.gov/newpermits/.

OSM. 2008. Wildlife harvest database. Microcomputer database, updated December 2007.

OSM 2011. Office of Subsistence Management Database. June 13, 2011.

Saether, B. E., E. J. Solberg, and M. Heim. 2003. Effects of altering sex ratio structure on the demography of an isolated moose population. Journal of Wildlife Management 67: 455-466.

Selinger, J. 2005. Area wildlife biologist. Personal communication. ADF&G, Soldotna, AK.

Selinger, J. 2006. Unit 15A moose management report. Pages 199–214 in P. Harper, ed. Moose management report of survey and inventory activities, 1 July 2003–30 June 2005. ADF&G. Fed. Aid in Wildl. Rest. Prog. Rep. Proj. 1.0, Juneau, AK.

Selinger, J. 2008. Unit 15 moose management report. Pages 207-222 in P. Harper, editor. Moose management report of survey and inventory activities 1 July 2005-30 June 2007. Alaska Department of Fish and Game. Project 1.0. Juneau, Alaska.

Solberg, E.J. and B-E. Saether. 1993. Male traits as life-history variables: annual variation in body mass and antler size in moose (Alces alces). Journal of Mammalogy 75: 1069-1079.

Spraker, Ted. 2002. Unit 15A moose management report. Pages 193–203 in C. Healy, ed. Moose management report of survey and inventory activities, 1 July 1999–30 June 2001. ADF&G. Project 1.0, Juneau, AK.

Stephenson, T.R., V.Van Ballenberghe, J.M. Peek, J.G. MacCracken. 2006. Spatio-temporal constraints on moose habitat and carrying capacity in Coastal Alaska: Vegetation succession and climate. Rangeland Ecology Management 59:359-372.

USFWS. 1996. Kenai National Wildlife Refuge Moose/Habitat Management Plan. Anchorage, AK: U.S. Fish and Wildlife Service. 50 pgs.

USFWS. 2010. Kenai National Wildlife Refuge Comprehensive Conservation Plan, Anchorage, AK. U.S. Fish and Wildlife Service.

West, R. 2007. Refuge Manager, Kenai NWR. Personal communication. Kenai NWR, Soldotna, AK.

INTRODUCTION

BACKGROUND

Since 1999, under the authority of Title VIII of ANILCA, the Federal government has assumed expanded management responsibility for subsistence fisheries on Federal public lands in Alaska. Expanded subsistence fisheries management has imposed substantial new informational needs for the Federal system. Section 812 of ANILCA directs the Departments of the Interior and Agriculture, cooperating with the State of Alaska and other Federal agencies, to undertake research on fish and wildlife and subsistence uses on Federal public lands, and to seek data from, consult with, and make use of the special knowledge of local residents engaged in subsistence uses. To increase the quantity and quality of information available for management of subsistence fisheries, the Fisheries Resource Monitoring Program (Monitoring Program) was established within the Office of Subsistence Management. The Monitoring Program was envisioned as a collaborative interagency, interdisciplinary approach to enhance existing fisheries research, and effectively communicate information needed for subsistence fisheries management on Federal public lands.

Although all proposals addressing subsistence fisheries on Federal lands will be considered, the 2012 Request for Proposals was focused on priority information needs developed either by strategic planning efforts or by expert opinion, followed by review and comment by the Subsistence Regional Advisory Councils. The Monitoring Program is administered by region, and strategic plans sponsored by this program were developed by workgroups of fisheries managers, researchers, Federal Subsistence Regional Advisory Council members and other stakeholders for three of the six regions: Southeast, Southcentral (excluding Cook Inlet Area), and Southwest Alaska. These plans identify prioritized information needs for each major subsistence fishery and can be viewed on or downloaded from the Office of Subsistence Management's website: http://alaska.fws.gov/asm/index.cfml. Independent strategic plans were completed for the Yukon and Kuskokwim regions for salmon in 2005. For the Northern Region and the Cook Inlet Area, assessments of priority information needs were developed from the expert opinions of the Regional Advisory Councils, the Technical Review Committee, Federal and State managers and staff from the Office of Subsistence Management. Additionally, a strategic plan for research on whitefish species in the Yukon and Kuskokwim river drainages was completed in spring 2011 as a result of efforts supported through Monitoring Program project 08-206.

Cumulative effects of climate change will likely fundamentally affect subsistence fishery resources, their uses, and how they are managed. Therefore, all investigators were asked to consider examining or discussing climate change effects as part of their project. Investigators conducting long-term projects were encouraged to participate in a standardized air and water temperature monitoring program for which the Office of Subsistence Management will provide calibrated temperature loggers and associated equipment, analysis and reporting services, and access to a temperature database. The Office of Subsistence Management has also specifically requested research proposals that would focus on effects of climate change on subsistence fishery resources and uses, and that would describe management implications.

> *The mission of the Monitoring Program is to identify and provide information needed to sustain subsistence fisheries on Federal public lands, for rural Alaskans, through a multidisciplinary, collaborative program.*

To implement the Monitoring Program, a collaborative approach is utilized in which five Federal agencies (Fish and Wildlife Service, Bureau of Land Management, National Park Service, Bureau of

Indian Affairs, and U.S. Forest Service) work with the Alaska Department of Fish and Game, Regional Advisory Councils, Alaska Native organizations, and other organizations. An interagency Technical Review Committee provides scientific evaluation of proposals and investigation plans. The Regional Advisory Councils provide review and recommendations, and public comment is invited. The Interagency Staff Committee also provides recommendations. The Federal Subsistence Board takes into consideration recommendations and comments from the process, and approves the final monitoring plan.

PROJECT EVALUATION PROCESS

The Technical Review Committee evaluates proposals, and subsequently full investigation plans, and makes recommendations for funding. The committee is chaired by the Fisheries Division Chief of the Office of Subsistence Management and is composed of representatives from each of the five Federal agencies and three representatives from the Alaska Department of Fish and Game. Fisheries and Anthropology staff from the Office of Subsistence Management provide support for the committee.

Four factors are used to evaluate studies:

1. **Strategic Priority**

   Proposed projects should address the following and must meet the first criteria to be eligible for Federal subsistence funding.

   Federal Jurisdiction—Issue or information needs addressed in projects must have a direct association to a subsistence fishery within a Federal conservation unit as defined in legislation, regulation and plans.

   Conservation Mandate—Risk to the conservation of species and populations that support subsistence fisheries, and risk to conservation unit purposes as defined in legislation, regulation and plans.

   Allocation Priority—Risk of failure to provide a priority to subsistence uses.

   Data Gaps—Amount of information available to support subsistence management (higher priority given where a lack of information exists).

   Role of Resource—Contribution of a species to a subsistence harvest (e.g., number of villages affected, pounds of fish harvested, miles of river) and qualitative significance (e.g., cultural value, unique seasonal role).

   Local Concern—Level of user concerns over subsistence harvests (e.g., upstream vs. downstream allocation, effects of recreational use, changes in fish abundance and population characteristics).

2. **Technical-Scientific Merit**

   The project must meet accepted standards for design, information collection, compilation, analysis, and reporting. Projects should have clear study objectives, an appropriate sampling design, correct statistical analysis, a realistic schedule and budget, and appropriate products, including written reports. Projects must not duplicate work already being done.

3. **Investigator Ability and Resources**

Investigators must have the ability and resources to successfully complete the proposed study. This will be evaluated considering ability in terms of education and training, related work experience, publications, reports, presentations, and past or ongoing work on Monitoring Program studies; and considering resources in terms of office and laboratory (if relevant) facilities, technical and logistic support, and personnel and budget administration.

4. Partnership-Capacity Building

Partnerships and capacity building are priorities of the Monitoring Program. ANILCA mandates that the Federal government provide rural residents a meaningful role in the management of subsistence fisheries, and the Monitoring Program offers tremendous opportunities for partnerships and participation of local residents in monitoring and research. Investigators are requested to include a strategy for integrating local capacity development in their investigation plans. Investigators must complete appropriate consultations with local villages and communities in the area where the project is to be conducted. Letters of support from local organizations add to the strength of a proposal. Investigators and their organizations should demonstrate their ability to maintain effective local relationships and commitment to capacity building.

POLICY AND FUNDING GUIDELINES

Several policies have been developed to aid in implementing funding.

- Proposals of up to four years duration may be considered in any year's monitoring plan.
- Studies must be non-duplicative with existing projects. Most Monitoring Program funding is dedicated to non-Federal sources.
- Activities not eligible for funding under the Monitoring Program include: a) habitat protection, restoration, and enhancement; b) hatchery propagation, restoration, enhancement, and supplementation; c) contaminant assessment, evaluation, and monitoring; and d) projects where the primary objective is capacity building (e.g., science camps, technician training, intern programs). These activities would most appropriately be addressed by the land management agencies.
- When long-term projects can no longer be funded by agencies, and the project provides direct information for Federal subsistence fisheries management, the Monitoring Program may fund up to 50% of the project cost.

Finances and Guideline Model for Funding

The Monitoring Program was first implemented in 2000, with an initial allocation of $5 million. Since 2001, a total of $6.25 million has been annually allocated for the Monitoring Program. In 2010, the total funding was reduced to $6.05 million. The Department of the Interior, through the U.S. Fish and Wildlife Service, has provided $4.25 million. The Department of Agriculture, through the U.S. Forest Service, provided $1.8 million annually. But the level of funding for 2012 is uncertain. If Department of Agriculture funding is not provided, none of the project investigation plans submitted for the Southeast Region would be funded.

The Monitoring Program budget funds continuations of existing projects (year-2, 3 or 4 of multi-year projects), and new projects in the biennial year. The Office of Subsistence Management issued requests for proposals on an annual basis until 2008, and then shifted to a biennial basis. Therefore, the next request for proposals after 2012 will be for 2014 proposals. Budget guidelines are established by

geographic region and data type, and for 2012, $2 million is projected to be available for new starts. Proposals are solicited according to the following two data types:

5. **Stock Status and Trends Studies (SST)**.

   These projects address abundance, composition, timing, behavior, or status of fish populations that sustain subsistence fisheries with linkage to Federal public lands. The budget guideline for this category is two-thirds of available funding.

6. **Harvest Monitoring and Traditional Ecological Knowledge (HM-TEK)**.

   These projects address assessment of subsistence fisheries including quantification of harvest and effort, and description and assessment of fishing and use patterns. The budget guideline for this category is one-third of available funding.

2012 FISHERIES RESOURCE MONITORING PLAN

For 2012, a total of 32 investigation plans are under consideration for funding (**Table 1**). Of these, 22 are SST projects and 10 are HM-TEK projects. The Technical Review Committee recommends funding 29 of these investigation plans.

Table 1. Number of investigation plans received for funding consideration in 2012, and number recommended for funding by the Technical Review Committee. Data types are stock status and trends (SST), and harvest monitoring and traditional ecological knowledge (HM-TEK).

	Investigation Plans			Technical Review Committee		
Geographic Region	**SST**	**HM-TEK**	**Total**	**SST**	**HM-TEK**	**Total**
Northern Alaska	4	3	7	3	3	6
Yukon	6	1	7	5	1	6
Kuskokwim	7	1	8	6	1	7
Southwest Alaska	0	3	3	0	3	3
Southcentral Alaska	1	1	2	1	1	2
Southeast Alaska	3	1	4	3	1	4
Multi-Regional	1	0	1	1	0	1
Total	22	10	32	19	10	29

Total funding available for new projects in 2012 is $2.70 million, while the proposed cost of funding all 32 projects submitted would be $2.74 million. The 29 projects recommended for funding by the Technical Review Committee have a total cost of $2.18 million. In making their recommendations, the committee weighed the importance of funding new projects in 2012 with the knowledge that the next request for proposals will be issued in 2014. As has been done in past years, any unallocated Monitoring Program funds from the current year will be used to increase the amount of funding available for subsequent years.

The 2012 draft Monitoring Plan recommended by the Technical Review Committee would provide 28% of the funding to Alaska Native organizations, 47% to State agencies, 14% to Federal agencies, and 11% to other non-government organizations.

SOUTHCENTRAL ALASKA REGION OVERVIEW

Issues and Information Needs

For the Southcentral Alaska Region, the 2012 Request for Proposals was focused on two priority information needs:

- Mapping of lifetime and current subsistence use areas for harvest of salmon and non-salmon fish species by residents of Ninilchik, Hope, and Cooper Landing. Research should include intensity of use and use on Federal public lands and waters.
- Harvest, use, and associated contextual information for salmon and nonsalmon by species in communities of the Copper River Basin, updating previous research supported by the Monitoring Program.

Projects Funded Under the Fisheries Resource Monitoring Program

Since the inception of the Monitoring Program in 2000, 44 projects have been funded in the Southcentral Alaska Region, and four of these projects are ongoing during 2012 (Tables 1 and 2). All of the ongoing projects are directed at Copper River salmon.

Projects Forwarded for Investigation Plan Development

Three proposals for research in the Southcentral Alaska Region were submitted to the Office of Subsistence Management for funding consideration in 2012. In March 2011, the Technical Review Committee reviewed these proposals and recommended two for development of investigation plans. Investigators used comments from the Technical Review Committee review of proposals to develop investigation plans. Detailed budgets submitted with each investigation plan allowed identification of funds requested by Alaska Native, State, Federal, and other organizations; funds that would be used to hire local residents; and matching funds from investigators (Tables 3 and 4).

Available Funds

Federal Subsistence Board guidelines direct initial distribution of funds among regions and data types. While regional budget guidelines provide an initial target for planning, they are not rigid allocations. Upon review and evaluation, the Technical Review Committee, Regional Advisory Councils, Interagency Staff Committee and Federal Subsistence Board have the opportunity to address the highest priority projects across regions. For 2012, approximately $135,000 is available for funding new projects in the Southcentral Alaska Region.

Recommendations for Funding

The mission of the Monitoring Program is to identify and provide information needed to sustain subsistence fisheries on Federal public lands for rural Alaskans through a multidisciplinary, collaborative program. It is the responsibility of the Technical Review Committee to develop the strongest possible monitoring plan for each region and across the entire state. After reviewing the two investigation plans, the Technical Review Committee recommended funding both of the proposed projects (Table 5):

10-500	Copper River Chinook Salmon RFID Feasibility	$	76,401
10-550	Upper Copper River Changing Environments and Subsistence	$	81,976
	Total	$	158,377

The two projects recommended for funding by the Technical Review Committee comprise a strong Monitoring Plan for the region by addressing strategically important information needs based on sound science and by promoting cooperative partnerships. Each project recommended for funding in the Southcentral Alaska region in 2012 is summarized below (see Executive Summaries for more details on all projects).

10-500 Copper River Chinook Salmon RFID Feasibility. This two-year project would examine the feasibility of placing radio frequency identification readers into a Copper River tributary to monitor Chinook salmon escapement. This project would piggyback on Monitoring Program Project 10-503, which estimates drainage-wide Chinook salmon abundance through mark-recapture methods using passive integrated transponders inserted into external T-bar tags. These marked Chinook salmon comprise up to 5% of the estimated drainage-wide Chinook salmon escapement each year. If they could be reliably detected by radio frequency identification readers placed in tributaries, resulting information would provide annual estimates of entry timing and relative abundance. While this project would not directly address a priority information need identified in the 2012 Request for Proposals, successful implementation of this technology could allow long term monitoring of tributary escapements and might contribute to a better understanding of climate change effects on run timing and spawning populations.

10-550 Upper Copper River Changing Environments and Subsistence. This two-year project would examine the various factors affecting subsistence harvests of salmon and other fishes in the Upper Copper River. This would be accomplished through use of available information as well as the collection of new information. Available information would be summarized and used to describe the characteristics and trends of the subsistence fisheries. New information would be obtained by documenting subsistence fishing effort, harvest, processing, and distribution of fish in four Copper River basin families in the communities of Mentasta, Slana/Nabesna Road, Chistochina, and Copper Center. This information would be used to identify factors affecting contemporary subsistence harvests of salmon and non-salmon and to determine whether and how these factors could be addressed through resource management practices. This project would address a priority information need identified in the 2012 Request for Proposals.

Table 1. Summary of Fisheries Resource Monitoring Program projects completed in Southwest Alaska since 2000. Abbreviations used for investigators are: ADFG=Alaska Department of Fish and Game, APIA= Aleutian-Pribilof Islands Association, BBNA=Bristol Bay Native Association, ISU= Idaho State University, KANA=Kodiak Area Native Association, NTC= Nondalton Tribal Council, NPS=National Park Service, QT=Qawalangin Tribe, USFWS=U.S. Fish and Wildlife Service, USGS=U.S. Geological Survey, USS&E=US Science and Education, and UW=University of Washington.

Project Number		Project Title	Investigators
		Bristol Bay Salmon	
00-010		Togiak River Salmon Weir	USFWS
00-031		Alagnak River Sockeye Salmon Escapement	ADFG, NPS, BBNA
00-033		Alagnak River Angler Effort Index	ADFG
00-042		Lake Clark Sockeye Salmon Assessment	USGS
01-047		Togiak River Subsistence Harvest Monitoring	BBNA, ADFG, USFWS
01-075		Nondalton Sockeye Salmon and Freshwater Fish TEK	NPS, NTC
01-095		Lake Clark Sockeye Salmon Escapement	USGS, UW
01-109		Traditional Ecological Knowledge of AkPeninsula/Becharolf NWR	ADFG, BBNA
01-173		Alagnak River Harvest Salmon Assessment of Recreational Fishery	ADFG
01-204		Ugashik Lakes Coho Salmon Escapement Estimation	USFWS, ADFG, BBNA
03-046		Fisheries Biotechnician Training Program	NPS
04-411	[a]	Lake Clark Sockeye Salmon Run Timing	ADFG
04-454		Bristol Bay Sharing, Bartering, and Trade of Subsistence Resources	ADFG, BBNA
05-402		Lake Clark Sockeye Salmon Escapement	NPS, USGS
08-402		Togiak River Chinook Salmon Radio Telemetry	USFWS, BBNA
08-405	[a]	Lake Clark Sockeye Salmon Assessment	NPS, USS&E, BBNA
		Chignik Salmon	
02-098		Kametalook River Coho Salmon Escapement & Carrying Capacity	USFWS, BBNA
02-099		Clark River Estimation of Sockeye and Coho Salmon Escapement	USFWS, BBNA
03-043		Perryville Coho Salmon Escapement	USFWS
05-405		Perryville-Chignik Coho and Sockeye Salmon Aerial Surveys	USFWS
07-404		Perryville-Clark River Coho and Sockeye Salmon Aerial Surveys	USFWS
		Bristol Bay-Chignik Freshwater Species	
00-011		Togiak River Dolly Varden Genetic Baseline Development	USFWS
00-012		Bristol Bay Traditional Knowledge of Fish	ADFG
02-034		Kvichak River Resident Species Subsistence Fisheries Assessment	ADFG, BBNA
04-401		Ungalikthlik and Negukthlik Rivers Rainbow Trout Assessment	USFWS
04-415		Tazimina Rainbow Trout Assessment	ADFG
05-403	[a]	Lake Clark Whitefish Assessment	ADFG, BBNA
07-408	[a]	Togiak River Rainbow Smelt Assessment	USFWS, BBNA
07-452		Kvichak Watershed Subsistence Fishing Ethnography	ADFG, BBNA, NPS
		Kodiak-Aleutians	
00-032		Buskin River Sockeye Salmon Stock Assessment	ADFG
01-059		McLees Lake Sockeye Salmon Escapement	USFWS
01-206		Mortenson Creek Sockeye and Coho Salmon Escapement	USFWS
02-032		Lower AK Peninsula/Aleutians Subsistence Fish Harvest Assessment	ADFG, APIA, ISU
03-047		Afognak Lake Sockeye Salmon - Smolt Enumeration Feasibility	ADFG
04-402		Mortenson Creek Sockeye and Coho Salmon Escapement	USFWS
04-403		McLees Lake Sockeye Salmon Escapement	USFWS
04-412		Afognak Lake Sockeye Salmon Stock Assessment	ADFG
04-414		Buskin River Sockeye Salmon Stock Assessment	ADFG
04-457		Kodiak Subsistence Fisheries Harvest Assessment and TEK	ADFG, KANA
07-401		Afognak Lake Sockeye Salmon Smolt Assessment	ADFG
07-402		Buskin River Sockeye Salmon Weir	ADFG
07-405		McLees Lake Sockeye Salmon Weir	USFWS, ADFG, QT
10-404	[a]	Buskin River Sockeye Salmon Smolt Assessment Feasibility	ADFG
10-406	[a]	McLees Lake Sockeye Salmon Weir	USFWS, ADFG, QT

[a] Final Report in preparation.

Table 2. Summary of onging 2012 projects funded under the Fisheries Resource Monitoring Program in Southwest Alaska. Abbreviations used for investigators are: ADFG=Alaska Department of Fish and Game, BBNA=Bristol Bay Native Association, and USFWS=US Fish and Wildlife Service.

Project Number	Project Title	Investigators	Budget 2012	Budget 2013
	Bristol Bay Salmon			
10-401	Afognak Lake Sockeye Salmon Smolt and Adult Assessment	ADFG	$147.0	$150.9
10-402	Togiak River Chinook Salmon Adult Assessment	USFWS, BBNA, ADFG	$210.1	$0.0
10-403	Buskin River Sockeye Salmon Adult Assessment	ADFG	$95.0	$96.8
	Total Southwest Alaska Monitoring Program		$147.0	$150.9

Table 3. Southwest Alaska project costs, by organization (Alaska Native, State, Federal, other), for investigation plans submitted to the Fisheries Resource Monitoring Program for funding consideration in 2012.

Project Number	Title	Budget ($000s) Alaska Native	State	Federal	Other
	Harvest Monitoring and Traditional Ecological Knowledge				
12-450	Aleutian Islands Salmon and Other Subsistence Harvests				$44.2
12-452	Lake Clark Whitefish Climate Change Trends	$55.9	$80.2	$2.0	
12-453	Kodiak Salmon Fishery Changing Patterns		$77.3	$9.0	

Table 4. Southwest Alaska local hire and matching funds for investigation plans submitted to the Fisheries Resource Monitoring Program for funding consideration in 2012. Abbreviations used are: ADFG=Alaska Department of Fish and Game and ISU=Idaho State University.

Project Number	Lead Organization	Title	Funding ($000s) Local Hire	Matching
		Harvest Monitoring and Traditional Ecological Knowledge		
12-450	ISU	Aleutian Islands Salmon and Other Subsistence Harvests	$0.0	$0.0
12-452	ADFG	Lake Clark Whitefish Climate Change Trends	$0.0	$0.0
12-453	ADFG	Kodiak Salmon Fishery Changing Patterns	$0.0	$0.0

Table 5. Southwest Alaska funding recommendations by the Technical Review Committee (TRC) for the 2012 Fisheries Resource Monitoring Program.

Project Number	Title	TRC		Requested Budget ($000) 2012	2013	2014	2015
	Harvest Monitoring and Traditional Ecological Knowledge						
12-450	Aleutian Islands Salmon and Other Subsistence Harvests	Yes	*	$44.2	$160.1	$100.0	$0.0
12-452	Lake Clark Whitefish Climate Change Trends	Yes		$138.2	$93.3	$53.4	$0.0
12-453	Kodiak Salmon Fishery Changing Patterns	Yes	*	$86.3	$86.3	$0.0	$0.0
	Total			$268.7	$339.7	$153.4	$0.0
	Guidelines			$405.0			
	TRC Recommended			$268.7	$339.7	$153.4	$0.0

* = Yes with modification

Project Number:	12-500
Project Title:	Feasibility of remote streambed RFID readers for long-term salmon population monitoring on the Copper River
Geographic Region:	Southcentral Alaska
Information Type:	Stock Status and Trends
Principal Investigator:	Keith van den Broek, Native Village of Eyak
Co-Investigator(s):	Jason J. Smith, LGL Alaska Research Associates, Inc.

Project Cost: **2012:** $76,401 **2013:** $74,503

Recommendation: Fund

Issue

Management of Copper River salmon is complex due to inter-annual variation in the size and timing of stocks, fisheries that target a mixture of species and intra-specific stocks, and difficulties in estimating abundance due to the physical characteristics of the drainage. The Native Village of Eyak, in partnership with Alaska Department of Fish and Game and LGL Alaska Research Associates, Inc., and funded through the Fisheries Resource Monitoring Program (Monitoring Program) and Alaska Sustainable Salmon Fund, have conducted multiple radio telemetry studies focused on the spawning distribution and stock-specific run timing of both Chinook and sockeye salmon (Monitoring Program projects 02-015, 05-502, and 05-501; Alaska Sustainable Salmon Fund project 45850). These studies have been hugely successful in providing a baseline of previously unknown information, but have also highlighted a substantial level of variability in these parameters between years. It is also unclear how much these populations will change over time, particularly in the context of climate change. Much longer-term or follow-up studies are warranted, but unfortunately the high cost of radio telemetry programs can be prohibitive. Even once the expensive receiver infrastructure is in place, the recurring high cost of tags, aerial surveys, maintenance, and personnel results in an incremental annual program cost at an average of $250,000 to represent only a very small (<1%) proportion of the total run. Also, esophageal radio tags can be stressful to fish, and a fairly high percentage fail or result in unknown fates. Up to 5% of the total Chinook salmon run is already being marked through project 10-503 using passive radio frequency identification (RFID) transponders encapsulated on a T-bar style tag, referred to as a T-bar anchor-passive integrated transponder tag (tag). This may provide an opportunity to monitor Chinook salmon passage into tributaries for a small investment in infrastructure and a very low recurring incremental cost. However, emerging technologies need to be tested and refined, and feasibility of this approach assessed before large-scale application can be pursued. This project builds upon project 10-503, updates previous research supported by the Monitoring Program, and, in the long term, could support a 2012 Multi-Region Priority Information Need by providing data to document "Changes in subsistence fishery resources and uses, in the context of climate change…".

Objective

To develop and assess the feasibility of using remote RFID readers and streambed antennas on select tributaries of the Copper River for long-term monitoring of spawning distribution and stock-specific run timing.

Methods

A remote RFID reader system would be installed in a single channel at Alaska Department of Fish and Game's Gulkana River counting tower site. The system would consist of a 134.2 kHz FDX RFID transceiver/logger, external pass-by antenna array and power supply. The transceiver and power supply would be housed in a weatherproof enclosure located on the island adjacent to the counting tower. Antennas would be anchored directly to the substrate, immediately downstream of the vinyl counting substrate. The system would be operated from 1 June to 15 August 2012-2013, and would continuously monitor for the presence of tags. Each tag passing the antenna array would be decoded and logged by the transceiver, and logged data would be downloaded on-site from the transceiver to a laptop computer once or more per day. Data would be cross-reference with tagging data from Baird Canyon, and each tagged Chinook salmon would be identified by tagging date and time.

Overall system efficacy and detection efficiency would be tested by comparison of logged transceiver detections with visual counts of marked fish from the counting tower by Alaska Department of Fish and Game and Native Village of Eyak technicians. Each tag visually observed but not recorded by the transceiver would be identified as a "failure to detect", while each tag both visually observed and logged would be identified as a "confirmed detection". The system would be tested and fine-tuned using tags attached to fishing lures and retrieved by rod and reel at varying depths and speeds across the full breadth of the antenna array, throughout the duration of the experiment, but only data from tagged salmon would be used to calculate overall detection efficiency of the system. Proportion of tagged Chinook salmon returning to the Gulkana River would be calculated by dividing the number of tags deployed at Baird by the number of tags detected at the Gulkana site. The number of tag detections would be an expanded count, calculated by dividing the number of actual detections by the detection efficiency of the system, and multiplying this number by the proportion of the total run migrating via the represented channel (using Alaska Department of Fish and Game expanded tower counts by channel). Migration rate from Baird Canyon to the Gulkana tower would be calculated for all detected tags. If multiple detections exist for a tag, only the first detection would be used. A run timing profile would be calculated for the Gulkana River based on detected tag dates at Baird Canyon and would be compared with historic data from radiotelemetry studies to assess major changes since the last study concluded in 2004.

Partnerships and Capacity Building

This project has been discussed with representatives from the U.S. Fish and Wildlife Service, U.S. Forest Service, Alaska Department of Fish and Game, Native Village of Eyak and LGL Alaska Research Associates, Inc. Mark Somerville at Alaska Department of Fish and Game's Glennallen office has offered support in allowing a system to be installed at the Gulkana counting tower site, and is excited about future partnership potential. All plans and resulting information would be shared with the Ahtna Tene Nene C&T Committee and Gulkana Village Council. Bureau of Land Management would be consulted as landowner and co-manager of the counting tower site.

LGL Alaska Research Associates, Inc. would provide technical review of data post-processing and statistical analyses. Hiring preference would be given to Alaska Natives and local residents, with particular effort made on this project to source a technician with extensive knowledge of RFID systems. This project would continue to build upon Native Village of Eyak's ability to conduct fisheries research and management activities on the Copper River. Native Village of Eyak's Copper River Chinook escapement monitoring program, Project 10-503, is currently funded through 2013. If detection of tags at the Gulkana site is successful, a tributary monitoring objective may be added to the proposal to continue the fish wheel mark-recapture project for the 2014 Request for Proposals. This would greatly enhance

the scope of the existing monitoring program to allow concurrent long-term monitoring of low resolution spawning distribution and stock-specific run timing for Chinook salmon, at a very low incremental cost to main stem mark-recapture efforts. It would also offer the potential to leverage spawning distribution studies for other anadromous species captured in mark-recovery fish wheels (sockeye, coho, steelhead, whitefish, and lamprey) for a very low cost of about $4 per tag.

Justification

This project would evaluate the use of radio frequency identification readers to monitor escapement of Chinook salmon into Copper River tributaries. If successful, this could allow long term monitoring of tributary escapements and might contribute to an understanding of climate change effects on a subsistence fishery resource, which is a 2012 priority information need. The investigators have successfully conducted other Monitoring Program projects, and there would be a high level of partnership and capacity building in conducting this project. Although this would be a feasibility study, the investigators demonstrated that they were knowledgeable of the challenges they would face with known limitations in available passive integrated transponder tag and radio frequency identification equipment in attempting to obtain high detection rates of passive integrated transponder tagged Chinook salmon. Their proposed methods are basically sound, although there are a few areas that would need to be more fully developed if this project is funded. These include training their technician in tower counting techniques, designing a tower counting schedule for their technician that increases opportunities to observe marked Chinook salmon, and exploring ways to improve techniques for testing and adjusting the radio frequency identification reader and antenna. The investigators were responsive to comments and suggestions provided in the review of the original proposal. They have agreed to conduct all feasibility work at the Gulkana tower site and, while they did not reduce their requested budget from that in the proposal after examining ways to reduce costs, their requested budget is reasonable for the proposed work.

Project Number:	12-550
Project Title:	Upper Copper River, Changing Environments and the Contemporary Subsistence Fisher
Geographic Region:	Southcentral Alaska
Information Type:	Harvest Monitoring/Traditional Ecological Knowledge
Principal Investigator:	Erica McCall Valentine, Ecotrust
Co-Investigator(s):	Robbin La Vine, Alaska Department of Fish and Game

Project Cost: **2012:** $18,967 **2013:** $86,575

Recommendation: Fund

Issue

This project addresses the U.S. Fish and Wildlife Service, Office of Subsistence Management's priority information need for federal subsistence fisheries in Southcentral Alaska: document the "harvest, use and associated contextual information for salmon and non-salmon by species in communities of the Copper River basin, updating previous research supported by the Fisheries Resource Monitoring Program (Monitoring Program). In addition, this project addresses two of the four goals of the Monitoring Program's strategic plan for Southcentral Alaska: "Assess and monitor subsistence fisheries to document and provide for subsistence uses; and promote public support and involvement for fisheries monitoring." Finally, this proposal addresses the Multi-Regional Priority Information Need on climate change and contemporary subsistence fishing patterns.

The research will also provide a social context for the harvest survey data that is currently being collected by the National Park Service on four communities within the Copper River watershed: Mentasta, Slana/Nabesna Road, Chistochina, and Copper Center (including the Silver Springs census-designated place). These study communities harvest within both the state and federal subsistence fishery areas and are therefore under the management authority of the State of Alaska and the National Park Service (the designated federal subsistence fishing authority in this area). All four communities are resident zone communities of the Wrangell St. Elias National Park and Preserve.

Objective

The project's overall research question, "What factors (social, cultural, demographic, economic, environmental) affect and/or influence contemporary subsistence salmon and non-salmon harvest and use patterns by residents of the Upper Copper River watershed over the course of a year?" is addressed by the following four project objectives:

1. Consolidate, synthesize and summarize the qualitative and quantitative data on all area resident subsistence fishing activities of the Upper Copper River basin, drawing upon existing traditional ecological knowledge (TEK) and harvest monitoring survey projects.
2. Describe the characteristics and trends of the contemporary salmon and non-salmon subsistence fisheries of the Upper Copper River basin.
3. Document the subsistence effort, harvest, processing and distribution of fish by four Copper River Basin families in the communities of Mentasta, Slana/Nabesna Road, Chistochina, and Copper Center (one family per community) over the course of one year, providing context to key respondent interviews and the NPS-led Copper Basin Community Harvest Assessment survey data.

4. Identify which factors most impact resident subsistence effort and harvest of salmon and non-salmon and discuss whether these factors can be addressed through management strategies.

Methods

Five methods (literature review, participant observation, key respondent interviews, case study families, and biographical mapping) will aid in describing the characteristics and trends of the contemporary salmon and non-salmon fisheries within the Upper Copper River basin.

A literature review will address Objectives 1 and 2 by identifying historical trends in the salmon and non-salmon fisheries, provide background to and further describe the contemporary subsistence fishery of the Upper Copper River watershed, and help frame questions for key respondent interviews and identify lines of inquiry for the ethnographic fieldwork.

Through participant observation, primary ethnographic data including subsistence harvest, use and distribution, study year environmental and climate-related observations, climate-related effects on harvests of salmon and other non-salmon species, seasonal movement, spawning areas, interactions with other fish and wildlife, trends in abundance and contemporary management systems will be collected. Eight families – two in each of the four study communities – will participate in this portion of the study. This method will contribute to addressing Objectives 2 and 3, while providing a foundation for addressing Objective 4.

As a means of verifying and augmenting data acquired through the literature review, participant observation and other recent harvest assessment projects (i.e. the National Park Service's 2010-2011 Copper Basin Harvest Assessment project), project investigators will also conduct semi-structured key respondent interviews with sixteen families – four families in each of the study communities. The key respondent interviews will meet Objectives 2 and 3, and provide data for the completion of Objective 4.

Through case study families, four families – one in each study community – will systematically document their subsistence salmon and non-salmon fishing activities over the course of one year. Subsistence harvests and use will be documented through photography, maps, journals and quarterly review interviews with investigators. This research method will address Objectives 2 and 3, and will contribute to the fulfillment of Objective 4.

Biographical mapping will geo-spatially reference data derived from and incorporated within the analysis of the above described methodologies – participant observation, key respondent interviews, and family case studies. The biographical maps will visually display (and therefore analyze) subsistence harvest, use, and distribution of salmon and non-salmon species within the Copper River. The biographical mapping method will address Objectives 2-4.

Partnerships and Capacity Building

This project further facilitates partnerships between non-profits, state agencies, federal agencies and Tribal councils within the Copper River watershed. Project investigators will partner with the Ahtna Heritage Foundation to conduct key respondent interviews and participant observations and to translate (as needed), summarize, transcribe (as needed) and catalogue digital audio recordings. The families participating in the year-round documentation of subsistence use and effort will be identified with the assistance from local tribal councils, local Alaska Native and community organizations and/or local fishery managers. Project investigators have extensive relationships with project partners throughout the basin which inherently strengthens the consultations and capacity building components of this project.

Justification

The proposed research responds to a 2012 Request for Proposals priority information need to investigate the harvest, use, and associated contextual information for salmon and non-salmon by species in communities of the Copper River Basin. The project will improve previous studies of traditional ecological knowledge by interviewing diverse Alaska Native and non-Native residents from a range of age groups and fishing participation levels. The research objectives are clear and achievable. The investigators have the ability to complete the work. The results should illuminate aspects of local knowledge not often captured in traditional ecological knowledge studies, which tend to focus on past knowledge and techniques. Focusing on current social contexts will develop information about changing knowledge and use patterns, which should prove beneficial in management decisions dependent upon understanding contemporary alterations to harvest levels and participation rates.

BRIEFING ON TRIBAL CONSULTATION

As discussed with the Regional Advisory Councils at the Winter 2011 meetings, the Federal Subsistence Board has been taking steps to formally incorporate tribal consultation into the Federal Subsistence Management Program, while maintaining the established role of the Councils. This action is consistent with the Secretaries of the Interior and Agriculture's renewed emphasis on respectful relationships with tribes.

Towards this end, Tribes were invited to participate in the January 18–21, 2011 Federal Board meeting. Invitations were sent to all Federally recognized Tribes in Alaska, as well as ANCSA corporations[1]. The invitations were twofold: Tribes and ANCSA Corporations were invited to provide comments on the fisheries proposals and they were also invited to a meeting on the 21st to discuss development of a consultation protocol for the overall Federal Subsistence Management Program. The meeting on the 21st was generally a listening session, and the Board recognized that development of specific consultation mechanisms would require further meetings between the Federal Subsistence Board and Tribes and ANCSA Corporations. The Board's goal is to work with Tribes and ANCSA Corporations to develop a consultation policy for the subsistence management program, consistent with Departmental policies.

At its May 4–5, 2011 meeting, the Federal Subsistence Board reviewed the summary of comments from the January 21st meeting, and directed that a workgroup comprised of a small number of Federal and tribal representatives be formed to develop a draft protocol(s) on consultation for the Board's review. The workgroup held an initial meeting in June 2011 to begin developing interim protocols to guide consultation between the Federal Subsistence Board and Tribes and ANCSA corporations.

In July 2012, the Board approved two interim protocols, one for Tribes and one for ANCSA Corporations; these will guide consultation efforts through the wildlife cycle. The interim protocols (included in the Council books), and an accompanying letter, were sent out to all Tribes and ANCSA Corporations in July. The Workgroup is continuing to work on drafting the final protocols, and multiple opportunities will be provided for Tribal and ANCSA Corporation involvement and review of the draft documents. It is hoped that the final protocols will be ready in time for the Board to adopt at its May 2012 meeting. A few key dates and events in the development of final protocols are as follows:

- October 20, 2011—Consultation with ANCSA Corporations at AFN
- December 1, 2011—Consultation with Federally recognized Tribes at the BIA Tribal Service Providers Conference
- January 17–19, 2012—Federal Subsistence Board meeting in Anchorage, discussion of draft protocols on the agenda

[1]Consultation with Alaska Native corporations is based on Public Law 108–199, div. H, Sec. 161, Jan. 23, 2004, 118 Stat. 452, as amended by Public Law 108–447, div. H, title V, Sec. 518, Dec. 8, 2004, 118 Stat. 3267, which provides that: "The Director of the Office of Management and Budget and all Federal agencies shall hereafter consult with Alaska Native corporations on the same basis as Indian tribes under Executive Order No. 13175." See also 25 USC Section 450, note.

Final as adopted by Federal Subsistence Board: July 12, 2011

U. S. Department of Interior

& U.S. Department of Agriculture

FEDERAL SUBSISTENCE BOARD

INTERIM PROTOCOL

FOR

GOVERNMENT-TO-GOVERNMENT CONSULTATION

The United States Government has a unique relationship with American Indian governments as set forth in the Constitution of the United States, treaties, statutes, court decisions, executive orders and policies. In recognition of that special relationship, on November 6, 2000, the President issued Executive Order 13175 (Consultation & Coordination with Indian Tribal Governments), which provided guidelines to all Federal agencies for establishing regular and meaningful consultation with Tribal officials in decision-making processes that may have Tribal implications. On November 5, 2009, a Presidential Memorandum was issued pursuant to Executive Order 13175, reaffirming the Federal government's commitment to operate within a government-to-government relationship with federally recognized tribes. Pursuant to the direction provided by the Secretaries of Interior and Agriculture, this document lays out an interim protocol for consultation between the Federal Government and Federally recognized Tribal Governments located in Alaska for the Federal Subsistence Board process.

The following **interim** protocol sets out a framework for consultation during the 2011 cycle of the Federal Subsistence Management Program with respect to: 1) the 2012-2014 wildlife regulatory proposals and 2) the Government-to-Government Subsistence Consultation Protocol.

1. Each federally recognized Tribe will be sent a letter from the Federal Subsistence Board inviting consultation on all 2012-2014 wildlife regulatory proposals. The letter will:
    a. Explain the interim consultation process and the need for this interim consultation effort regarding the 2012-2014 wildlife regulatory proposals.
    b. Explain that the final consultation protocol is expected to be in place by May 2012 in time to be implemented for the fisheries regulatory cycle process.
    c. Inform the Tribes of the face-to-face consultation opportunity focusing on the consultation protocol during the Tribal Service Providers Conference on the afternoon of December 1, 2011 in Anchorage.
2. Government-to-government consultation will take place regarding the 2012-2014 wildlife regulatory proposals during the August 15 through September16, 2011, timeframe.
    a. Conduct a consultation via teleconference for each Federal Subsistence Regional Advisory Council area prior to the Regional Advisory Council meeting.
        i. At least four Federal Subsistence Board members or their designees will participate in each teleconference.

Final as adopted by Federal Subsistence Board: July 12, 2011

ii. Federal officials will receive training on principles and practices of government-to-government consultation prior to participating in the teleconferences.

iii. A Tribal official and Federal official will be selected during the consultation to jointly report the results of the consultation to the Federal Subsistence Regional Advisory Council.

3. An in-person government-to-government consultation will be held the day prior to the January Federal Subsistence Board meeting regarding wildlife regulatory proposals and the May Board meeting regarding the consultation protocol.

Final as adopted by Federal Subsistence Board: July 12, 2011

FEDERAL SUBSISTENCE BOARD

INTERIM PROTOCOL

FOR

GOVERNMENT-TO-ANCSA-CORPORATIONS CONSULTATION

Pursuant to the direction provided by the Secretaries of Interior and Agriculture, this document lays out an interim protocol for consultation between the Federal Government and Alaska Native Claims Settlement Act (ANCSA) Corporations.

ANCSA Corporations, by mandate of the 25 USC §450 note (Consultation with Alaska Native corporations), must be consulted with by the Federal Subsistence Board with respect to: 1) the 2012-2014 wildlife regulatory proposals and 2) the Government-to-ANCSA-Corporations Subsistence Consultation Protocol.

Interim Consultation Protocol:

1. Each ANCSA corporation will be sent a letter from the Federal Subsistence Board inviting consultation on all 2012-2014 wildlife regulatory proposals.
   The letter will:
   a. Explain the interim consultation process and the need for this interim consultation effort regarding the 2012-2014 wildlife regulatory proposals.
   b. Explain that a final protocol is expected to be in place by May 2012, in time to be implemented for the fisheries regulatory cycle process.
   c. Mention the Board's interest in having a presentation made about the consultation protocol at the AFN convention.
2. Two dates will be scheduled for a government-to-ANCSA-corporations consultation teleconference opportunity prior to August 22, 2011.
   a. ANCSA corporations can choose to consult at either or both teleconferences.
   b. At least four Federal Subsistence Board members or their designees will participate at each consultation.
   c. ANCSA corporations and Federal agencies will each appoint a representative to report the results of consultation to each of the 10 Federal Subsistence Regional Advisory Councils during the fall 2011 Regional Advisory Council meetings.

STATUS REPORT ON THE SECRETARIAL RECOMMENDATIONS TO THE FEDERAL SUBSISTENCE MANAGEMENT PROGRAM

"Subsistence is of critical cultural as well as nutritional importance to rural Alaskans, and I take seriously the responsibility for carrying out the mandate of Title VIII of ANILCA to provide opportunities and priority for subsistence uses on Federal lands and waters."

Secretary Salazar, December 2010

Implementation of a subsistence program that fulfills the obligations of the U.S. Government to rural families is important to me. The Federal Subsistence Management Program in Alaska aligns closely with the mission of the U.S. Department of Agriculture's (USDA) mission and embodies key priorities that include sustaining the livelihood of rural families, ensuring access to healthy and affordable food, providing jobs in rural communities, sustaining cultural and traditional ways of life, and strengthening relationships with Alaska Native tribes.

Secretary Vilsack, April 2011

In 2009, the Secretaries of Interior and Agriculture announced a review of the Federal Subsistence Management Program, acknowledging that it was no longer temporary, and stating that there was value in examining the program. Their stated goals were to look ahead to plan for the future of the program to ensure that it is best serving rural Alaskans and that the letter and spirit of Title VIII of ANILCA are being met. The review began in November 2009, and preliminary recommendations were released in August 2010.

In December 2010 the Secretary of Interior with concurrence from the Secretary of Agriculture announced the results of their review and provided several recommendations to the Federal Subsistence Board towards the purpose of providing a more responsive, effective program.

All of these recommendations can be implemented by the Secretary of the Interior or by the Secretary with concurrence of the Secretary of Agriculture, or by the Federal Subsistence Board. Most can be accomplished as a matter of Secretarial directive or policy. However, some would be regulatory changes requiring a formal rule-making process. The Federal Board prioritized the recommendations and began working on a subset in December 2010. Work is proceeding as follows:

1. Develop a proposed regulation to increase the membership on the Federal Subsistence Board to include two additional public members representing subsistence users.

    - **Status**: A Final Rule has been published in the Federal Register. The language adopted by the Secretaries is as follows:

      "(1) The voting members of the Board are: … two public members representing rural Alaskan subsistence users who possess personal knowledge of and direct experience with subsistence uses in rural Alaska to be appointed by the Secretary of the Interior with the concurrence of the Secretary of Agriculture."

    - The Secretaries will be seeking applications/nominations for the two seats and are hoping to have the two positions seated by January 2012.

2. As a matter of policy, expand deference to appropriate RAC recommendations in addition to the "takings" decisions of the Board provided for under Section 805(c) of ANILCA, subject to the three exceptions found in that Section.

    - **Status:** The Board is still in the process of considering expanding its deference to Regional Advisory Council recommendations to matters beyond take. The Board is generally supportive of expanding deference to Councils on C&T and has yet to determine whether or not it is sufficient to reflect this perspective in policy or if rulemaking needs to be pursued. With regard to deference on rural determinations, the Board is continuing to learn the intricacies of the regulations and the process, and is exploring whether or not deference regarding rural determinations is appropriate given Court findings. Finally, with regard to deference on in-season management decisions, the Board understands that because in-season management decisions often must be made quickly in response to newly obtained information, deference to Council recommendations will occur only when time and conservation allow.

3. Review, with RAC input, the December 2008 Memorandum of Understanding (MOU) with the State to determine either the need for the MOU or the need for potential changes to clarify federal authorities in regard to the subsistence program.

    - **Status:** The MOU was provided to all ten Regional Advisory Councils for comment during winter 2011 meeting cycle. Council comments were summarized and reviewed by the Board in summer 2011. The Board has directed that the changes recommended by the Councils be examined by a work group comprised of both state and federal members, with a report back to the Board and final action on proposed changes by December 2011.

4. Review, with RAC input, the customary and traditional use determination process and present recommendations for regulatory changes.

    - **Status**: All ten Regional Advisory Councils were asked for their perspectives on the existing process during the Winter 2011 meeting cycle. These comments were summarized and reviewed by the Board in May 2011. Because most comments were generally supportive of the existing process, the Board is focusing its energies on other action items at this point in time.

5. Review, with RAC input, rural/nonrural determination process and present recommendations for regulatory changes.

    - **Status:** The Board held a work session in April to learn about rural process, and is continuing to learn the intricacies of the regulations and the process. In response to the Secretarial Review, the Board is exploring whether or not it can delay the implementation date for the communities or areas which were rural and were determined to be nonrural during the 2000 review process. The Board is evaluating how best to proceed in conducting the 2010 rural determination process.

6. Review the Board's written policy on executive sessions and minimize the use of executive sessions to those cases specifically prescribed.

- **Status:** The Board has revised its Executive Session policy to reflect that it intends to keep its business transparent, and will provide a summary of Executive Sessions as and when they occur. The Board adopted its revised policy at its May 2011 meeting.

7. At the request of the Director of the US Fish and Wildlife Service and under Departmental procedures, review and submit recommendations for Departmental consideration of the annual budget for the Federal subsistence program. Under this directive, the following elements (gleaned from the Secretarial Review comments) are recommended as a focus:

   a. Hold Federal Subsistence Board meetings in rural areas

      - **Status**: Pending Additional funding

   b. Increase Training and support to Regional Advisory Councils

      - **Status**: Implement when funding and staffing allow.

   c. Implement Wildlife Monitoring Studies

      - **Status:** Pending additional funding

   d. Increase Tribal Consultation

      - **Status:** In Progress (see written briefing)

   e. Increase capacity within Office of Subsistence Management for research and implementation

      - **Status:** Pending additional funding

   f. Reinstate the annual regulatory cycle

      - **Status:** The Board sees the value of every other year cycle, but may be open to reinstating the annual cycle should funding allow.

The Federal Board has not yet begun work on the following directives:

8. Review, with RAC input, and present recommendations for changes to Federal subsistence procedural and structural regulations (Parts A&B of the CFRs) adopted from the State in order to ensure Federal authorities are fully reflected and in accord with subsistence priorities provided for in Title VIII.

9. Ensure the Secretaries are informed when non-Department rule-making entities develop regulations that may adversely affect subsistence users.

10. To the extent practicable, utilize contracting and use of ANILCA Section 809 cooperative agreements with local tribes and other entities in the Board's review and approval of proposals for fulfilling subsistence program elements.

BUDGET IMPLICATIONS

The Secretary's 2010 Report recognizes that the Federal program will be in place for the foreseeable future and as such, it must fulfill the commitments made in ANILCA relative to providing for the rural subsistence priority. In light of the Secretary's emphasis on the Federal Subsistence Management Program and resultant heightened expectations of rural Alaskans, additional funding is needed for the Federal Subsistence Management Program to implement many of the Secretarial Recommendations. Unfortunately, funding in 2012 and beyond is likely to be flat or reduced; this will affect the ability of both the Board and the Program to deliver on certain of these recommendations.

BRIEFING ON GULF OF ALASKA CHINOOK SALMON BYCATCH

In 2010, the amount of Chinook salmon bycatch was over 51,000 fish in the Gulf of Alaska groundfish fishery, one of the highest bycatch amounts on record. Most of the bycatch (41,000) was taken during the pollock fishery. The North Pacific Fishery Management Council expedited this issue in order to address it through regulation no later than the start of the 2012 fishing season.

During its April 2011 meeting in Anchorage, the North Pacific Fishery Management Council adopted a preliminary preferred alternative with a hard cap of 22,500 Chinook salmon, an amount higher than the 2003–2010 bycatch average of approximately 19,000 utilized in the staff analysis. In May 2011, the Federal Subsistence Board sent a letter to the North Pacific Fishery Management Council recommending a hard cap of 15,000, the lowest hard cap amount among the range of alternatives under consideration. If the Board's recommendation was adopted it would more likely lead to a "de facto" reduction in Chinook salmon bycatch in the Gulf of Alaska. The Board's recommended this cap because they were very concerned about Chinook salmon runs on Kodiak Island, which have had escapement goal shortfalls and subsistence harvest restrictions in recent years.

At its June 2011 meeting in Nome, the North Pacific Fishery Management Council took final action on this issue and selected a hard cap of 25,000 Chinook salmon for the commercial pollock fishery. The full Council's motion can be read at:
http://www.fakr.noaa.gov/npfmc/current_issues/bycatch/GOAChinookBycatchMotion611.pdf

Federal Subsistence Board
1011 E. Tudor Rd., MS 121
Anchorage, Alaska 99503-6199

U.S. FISH and WILDLIFE SERVICE
BUREAU of LAND MANAGEMENT
NATIONAL PARK SERVICE
BUREAU of INDIAN AFFAIRS

U.S. FOREST SERVICE

FWS/OSM11057/TT

Eric Olson, Chair
North Pacific Fishery Management Council
605 W. 4th Avenue, Suite 306
Anchorage, Alaska 99501-2252

MAY 20 2011

Dear Mr. Olson:

The Federal Subsistence Board (Board) appreciates the opportunity to provide its comments on the initial review draft of the *Environmental Assessment/ Regulatory Impact Review/ Initial Regulatory Flexibility Analysis for Amendment 90 to the Fishery Management Plan for Groundfish of the Gulf of Alaska, Chinook Salmon Bycatch in the Gulf of Alaska pollock Fishery (EA),* dated March 2011, and the North Pacific Fishery Management Council's (NPFMC) preliminary preferred alternative. The Board, comprised of the Regional Directors of the U.S. Fish and Wildlife Service, the Bureau of Indian Affairs, the National Park Service, the Bureau of Land Management and the USDA Forest Service, and a Chair appointed by the Secretaries of the Interior and Agriculture, provides subsistence fishing opportunities in Federal public waters in Alaska under Title VIII of the Alaska National Interest Lands Conservation Act (ANILCA).

Bycatch is of concern to the Board and the affected Regional Advisory Councils because the Chinook salmon stocks listed in Table 63, page 124 of the EA, are important subsistence resources for Federally-qualified subsistence users in several areas of the state, including Southeast Alaska, Prince William Sound, Cook Inlet and Kodiak Island.

The Board urges the National Marine Fisheries Service and North Pacific Fishery Management Council to significantly reduce the amount of Chinook salmon bycatch in the GOA pollock fishery. Several Chinook salmon runs, most likely impacted by the GOA pollock fishery, were rated as "poor" to "below average" in 2010, as pointed out in Table 63, page 124 of the EA. The Chinook salmon runs on Kodiak Island are of particular concern. In 2010, Chinook salmon escapement in the Karluk River was below the escapement goal range for the fourth consecutive year and the subsistence fishery was closed the entire season. This was the third consecutive year that restrictions to the Chinook salmon subsistence fishery were necessary. In January 2011, the Alaska Board of Fisheries designated Karluk River Chinook salmon a stock of concern. In the nearby Ayakulik River, the lower end of the Chinook salmon escapement goal was achieved in 2010, however escapement goals were not met in 2006-2009.

Eric Olson 2

The Board believes that the proposed hard cap of 22,500 in the Preliminary Preferred Alternative does not represent a meaningful reduction in Chinook salmon bycatch, as it is higher than the 2003-2010 bycatch average of approximately 19,000 Chinook shown in Table 4, page 21. Therefore, **the Board recommends that a hard cap of 15,000 be adopted.** This alternative would provide a better opportunity for increased numbers of Chinook salmon to reach affected rivers to help achieve escapement goals and provide for subsistence uses. In addition, the option of allowing a 25% "overage provision" one out of every three years should be eliminated, as it appears to be incongruent with the Council's stated goal to reduce bycatch. The Board also recommends that the NPFMC recognize the importance of subsistence in the Problem Statement and more fully discuss the status of the Chinook salmon stocks most likely impacted by the GOA pollock fishery.

Thank you for this opportunity to provide our comments and recommendations on this important subsistence issue. If the Board can be of further assistance, please contact Peter J. Probasco, Assistant Regional Director, Office of Subsistence Management, at (907) 786-3888. The Board will continue to monitor developments on this issue and looks forward to the results of your efforts to significantly reduce Chinook salmon bycatch in the GOA pollock fishery.

Sincerely,

/S/

Tim Towarak
Chair, Federal Subsistence Board

cc: Federal Subsistence Board members
Gene Virden, Acting Regional Director - Bureau of Indian Affairs
Bud Cribley, State Director - Bureau of Land Management
Sue Masica, Regional Director - National Park Service
Geoff Haskett, Regional Director - U.S. Fish and Wildlife Service
Beth Pendleton, Regional Forester - USDA Forest Service
Pat Pourchot, Department of the Interior, Alaska
Peter J. Probasco, Office of Subsistence Management
Speridon Simeonoff, Chair, Kodiak/Aleutians Regional Advisory Council
Ralph Lohse, Chair, Southcentral Alaska Regional Advisory Council
Bert Adams, Chair, Southeast Alaska Regional Advisory Council
Cora J. Campbell, Commissioner, Alaska Department of Fish and Game
James W. Balsiger, Administrator, Alaska Region, National Marine Fisheries Service

Southcentral RAC Appointment to the Wrangell-St. Elias National Park Subsistence Resource Commission

Under the provisions of ANILCA Section 808(a), the Southcentral, Southeast, and Eastern Interior Federal Subsistence Regional Advisory Councils (RACs) each appoint one member to the Wrangell-St. Elias National Park Subsistence Resource Commission (SRC). Eligible candidates must be members of the RAC or of a local advisory committee in the region and also engage in subsistence uses within the park. Current Southcentral RAC members who meet these qualifications are Gloria Stickwan (incumbent, term expiring November 2011), Lee Adler, and Ralph Lohse. The Copper Basin and Tok Cutoff/ Nabesna Road ACs have been contacted about whether any of their members are interested in serving as candidates, however thus far no additional candidates have emerged.

++++++++++++++++++++++++++++++++++++

Excerpt from the Alaska National Interest Lands Conservation Act:

PARK AND PARK MONUMENT SUBSISTENCE RESOURCE COMMISSIONS

§808. (a) Within one year from the date of enactment of this Act the Secretary and the Governor shall each appoint three members to a subsistence resources commission for each national park or park monument within which subsistence uses are permitted by this Act. **The regional advisory council established pursuant to §805 which has jurisdiction within the area in which the park or park monument is located shall appoint three members to the commission each of whom is a member of either the regional advisory council or a local advisory committee within the region and also engages in subsistence uses within the park or park monument.** Within eighteen months from the date of enactment of this Act, each commission shall devise and recommend to the Secretary and the Governor a program for subsistence hunting within the park or park monument. Such program shall be prepared using technical information and other pertinent data assembled or produced by necessary field studies or investigations conducted jointly or separately by the technical and administrative personnel of the State and the Department of Interior, information submitted by, and after consultation with the appropriate local advisory committees and regional advisory councils, and any testimony received in a public hearing or hearings held by the commission prior to preparation of the plan at a convenient location or locations in the vicinity of the park or park monument. Each year thereafter. the commission, after consultation with the appropriate local committees and regional councils, considering all relevant data and holding one or more additional hearings in the vicinity of the park or park monument, shall make recommendations to the Secretary and the Governor for any changes in the program or its implementation which the commission deems necessary.

(*Emphasis added*.)

Winter 2012 Regional Advisory Council Meeting Calendar

February–March 2012 current as of 03/28/11

Meeting dates and locations are subject to change.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Feb. 12	*Feb. 13* *Window Opens*	*Feb. 14*	*Feb. 15*	*Feb. 16*	*Feb. 17*	*Feb. 18*
		SP—Nome	**NS—Barrow**			
Feb. 19	*Feb. 20* ***HOLIDAY***	*Feb. 21*	*Feb. 22*	*Feb. 23*	*Feb. 24*	*Feb. 25*
				YKD—Emmonak		
Feb. 26	*Feb. 27*	*Feb. 28*	*Feb. 29*	*Mar. 1*	*Mar. 2*	*Mar. 3*
		WI—McGrath			**EI—Central**	
Mar. 4	*Mar. 5*	*Mar. 6*	*Mar. 7*	*Mar. 8*	*Mar. 9*	*Mar. 10*
	BB—Naknek		**NWA—Kotzebue**			
Mar. 11	*Mar. 12*	*Mar. 13*	*Mar. 14*	*Mar. 15*	*Mar. 16*	*Mar. 17*
	SE—Sitka					
		SC—Anchorage				
Mar. 18	*Mar. 19*	*Mar. 20*	*Mar. 21*	*Mar. 22*	*Mar. 23* *Window Closes*	*Mar. 24*
			K/A—Old Harbor			

Fall 2012 Regional Advisory Council Meeting Calendar

August 20–October 12, 2012 current as of 07/20/11

Meeting dates and locations are subject to change.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Aug. 19	*Aug. 20* *WINDOW OPENS*	*Aug. 21*	*Aug. 22*	*Aug. 23*	*Aug. 24*	*Aug. 25*
Aug. 26	*Aug. 27*	*Aug. 28*	*Aug. 29*	*Aug. 30*	*Aug. 31*	*Sept. 1*
Sept. 2	*Sept. 3* ***HOLIDAY***	*Sept. 4*	*Sept. 5*	*Sept. 6*	*Sept. 7*	*Sept. 8*
Sept. 9	*Sept. 10*	*Sept. 11*	*Sept. 12*	*Sept. 13*	*Sept. 14*	*Sept. 15*
Sept. 16	*Sept. 17*	*Sept. 18*	*Sept. 19*	*Sept. 20*	*Sept. 21*	*Sept. 22*
Sept. 23	*Sept. 24*	*Sept. 25*	*Sept. 26*	*Sept. 27*	*Sept. 28*	*Sept. 29*
Sept. 30 *END OF FY2012*	*Oct. 1*	*Oct. 2*	*Oct. 3*	*Oct. 4*	*Oct. 5*	*Oct. 6*
Oct. 7	*Oct. 8* ***HOLIDAY***	*Oct. 9*	*Oct. 10*	*Oct. 11*	*Oct. 12* *WINDOW CLOSES*	*Oct. 13*

Ahtna, Incorporated

May 26, 2011

Federal Subsistence Board
c/o Fish and Wildlife Service
ATTN: Theo Matuskowitz
Office of Subsistence Management
1011 E. Tudor Rd., MS-121
Anchorage, AK 99503

Dear Mr. Matuskowitz:

Attached is the Ahtna Tene Nene' Customary & Traditional Use Committee's comments on the Federal Subsistence 2012-2014 Wildlife Proposals.

Sincerely,

Gloria Stickwan
for
Eleanor Dementi

Eleanor Dementi, Chair

P.O. Box 649 – Glennallen, Alaska 99588
Phone: (907) 822-3476 – Fax: (907) 822-3495

Federal Subsistence 2012-2014 Wildlife Proposals

WP12-01
We support WP12-01 to require "handicrafts made from brown bear claws that are not attached to the hide or are separate from the brown bear hide to be sealed by an authorized ADF&G representative prior to selling the handicraft, and that a copy of the sealed ADF&G certificate must accompany the handicraft, when it is sold". Although, the population of brown bear is not a concern in Unit 12, it is still good to have AD&G monitor the sale of brown bear handicrafts.

WP12-02
We oppose WP12-02 to change Designated Hunter regulation so that they can only hunt for a person who is 60 years older or disabled. Many single parents, women without significant others, do not have anyone in the household to hunt for them. If the Designated Hunter regulation was changed they would not have anyone to hunt for them. Additionally, an ill, injured person, or other family members would not have someone hunt for him or her, too.

WP12-03
We oppose WP12-03 to clarify regulations, "that trappers will not be cited for incidental catch of non-target species the following year if it occurs in the same area as the previous year". If the proponent wants to have this regulatory change in their region, then this proposal should only apply for that region. This should not be a statewide regulatory change. Citations for non-targeted species caught in a trap are not yet a problem within our region.

WP12-23
We oppose WP12-23 which would allow a take of 25 bull caribou in Unit 11, with a federal registration permit only and with a hunting season date of
Oct. 21-Mar. 31.

The mixing of Nelchina with Mentasta caribou herd during the hunting season is a concern. Right now the Mentasta Caribou herd population is
250-300; this population figure includes the Nelchina Caribou Herd population due to intermingling of the two caribou herds.

Additionally, as of May 2011 conveyance of the land area in Unit 13C described in the proposal has not yet occurred; it is still federal public lands. No one knows when the land conveyance will occur.

The proposed hunting area is confusing as it is written in the proposal. A better description should be made or a map delineating land marks should be made.

WP12-24
We are neutral on WP12-24 to open a hunt for Unit 11 Caribou with a season date of August 1-September 30 for 1 bull caribou by federal registration permit only, with the inseason federal manager consulting with ADF&G for the quota and needed closure. The Mentasta Caribou Herd management plan should be reviewed to determine whether the herd can sustain a hunting season.

WP12-25
We support WP 12-25 to have a 9 day longer hunting season for Unit 13 Caribou from Aug. 1- Sept. 30. A longer season date will give more opportunity to federally qualified subsistence users to hunt for caribou and harvest caribou. The Nelchina caribou herd population is above ADF&G's management objective and can sustain a longer hunting season.

WP12-27
We support WP12-27 to grant C&T for Unit 11 Goats to Tok Cutoff Road (milepost 27-110) (Mentasta Pass) and Nabesna Road (mileposts 25-46). Those people who live along the highway system already have C&T for black bear, brown bear, caribou, sheep and moose. Since they have C&T for other species they should have C&T for Unit 11 Goat, too.

WP12-32
We support 12-32 to have an earlier Unit 11 Sheep hunting season of Aug. 1-Aug. 9 so that the youth and elders will be able to hunt for sheep and pass on customs and practices of sheep uses and hunting of sheep. It is important for Elders to pass on their knowledge to the younger generation!

WP12-33
We adamantly oppose WP12-33 to limit Unit 11 and Unit 12 Wolf hunting season from Aug. 10-Apr. 30 to Nov. 1-Mar. 31. Wolves in Unit 11 are preying upon calves of moose and caribou in Unit 11, and are jeopardizing the population of moose and Mentasta caribou herd. Population of wolves in Unit11 and Unit 12 is not a conservation concern. Federal management to attempt to control population of wolves so that moose and caribou population can increase for human consumption is sound management principle! Federally Qualified subsistence users do not eat wolves!

WP12-34
We oppose WP12-34 to reduce the Unit 13D Wolf hunting season from Aug. 10-April to Nov. 1-March 31 with a reduced take from 10 wolves to 5 wolves. Reducing wolf hunting season is not necessary; wolf population is not a conservation concern. Predation upon moose calves by wolves is major concern in Unit 13; more wolves need to be killed to reduce their population.

WP12-64
We oppose WP12-64 to increase the harvest limit for caribou in Unit 12 Tetlin Refuge Areas from one to two with a season date of Nov. 1-March 31, with sex to be announced by Tetlin Refuge Manager. Mingling of the Mentasta caribou herd and Nelchina occurs within the Tetlin Refuge land areas. The Mentasta Caribou herd population is in jeopardy. Opening (2) caribou take in Unit 12 will further erode Mentasta Caribou Herd population.

WP12-65
We oppose WP12-65 and support WP12-66. WP12-65 proposes to have a 2 year test period, which would set a "test" for the federally qualified subsistence users. If they fail to harvest the caribou quota within the 2 year test period, then the State would have an open caribou season. We oppose this 2 year test period. federally qualified subsistence

users do not have the means to travel to these remote areas to hunt in Unit12 for caribou, and may not harvest the quota of caribou allotted to them. A caribou hunt would then be allowed in Unit 12 for sport hunters and Guides.

WP12-66
We support WP12-66 to allow a Unit 12 Caribou hunt within the WRST Park that lies east of the Nabesna River and the Nabesna Glacier; with a harvest quota and number of permits to issued by Wrangell-St. Elias National Park and Preserve and to open it only for the Federally qualified subsistence users under these regulations. Unless a good reason is given for not doing so, successful harvest is to be reported within 3 days of harvest. Furthermore, we agree that an ANILCA Section 804 analysis be done and a working group formed to work out the details of the Chisana Caribou hunt. A drawing permit is a good idea for a way of distributing permits equally among Federally Qualified subsistence users.

WP12-68
We support WP12-68 to grant C&T for the Chistochina community for Unit 12 Caribou. The Ahtna People have historically fished and hunted in all of Unit12 and should be given C&T for all species in Unit 12. It is well documented that the Ahtna People have hunted and continue to hunt in all of Unit 12 for all species.

WP12-70
We adamantly oppose WP12-70 which would establish a joint State-Federal registration permit. Federal moose hunting season should more liberal, if there is not a conservation concern of the species. We do not support any joint State-Federal regulation hunts.

WP12-71
We oppose WP12-71 for the same reasons stated in WP12-70.

WP12-72
We oppose WP12-72 for the same reasons stated in WP12-70.

WP12-73
We support WP12-73 - Unit 12 Remainder 1 antlered bull with hunting season date of Aug. 25-Sept. 25, with an amendment to have a Federal Registration permit hunt only in Unit 12 for moose.

Deleting the multiple moose hunting seasons, which were adopted from the state would and make it easier for the public to understand federal regulations.

Additionally, a later moose hunting season would allow Federally qualified subsistence users to take a moose when it is cooler during the moose hunting season. Meat would not spoil during the cooler months.

WP12-77
We adamantly oppose WP12-77 to reduce Unit 12 Wolf trapping season from Oct. 1-Apr. 30 to Nov. 1-Mar. 31 for similar reasons as stated in WP12-33.

WP12-78
We adamantly oppose WP12-78 to shorten Unit 20A Wolf hunting season from Aug.10-April 30 to Nov. 1-Mar. 31, and to reduce wolf take from 10 wolves to 5 wolves; please see comments in WP12-33.

WP12-79
We adamantly oppose WP12-79 to reduce Unit 12 Wolf trapping season from Nov1-Apr. 30 to Nov. 1-Mar. 31 for similar reasons as stated in WP12-33.

WP10-02 (Deferred)
No. comment. See comments under WP12-01.

WP10-104 (Deferred)
No comment. See comments under WP12-66.

Sitka Tribe of Alaska

Tribal Government for Sitka, Alaska

May 27, 2011

Federal Subsistence Board
Office of Subsistence Management
1011 E Tudor Rd, MS 121
Anchorage, AK 99503

RE: Comments on the 2012-2014

Dear Federal Subsistence Board,

I am writing to provide comments on the 2012-2014 wildlife proposals on behalf of the Sitka Tribe of Alaska (STA). STA staff believes proposals WP12-02 and WP12-06 would severely impact the ability of tribal citizens to meet their subsistence needs and should not be adopted.

Proposal WP12-02
STA staff feel the "elders (60 years or older) or a person whom is disabled" is too restrictive and would prevent those who qualify for subsistence from meeting their subsistence needs. There could be numerous other obstacles that prevent qualified subsistence harvesters (who are truly in need of the resource to survive) from participating in the harvest.

Proposal WP12-06
STA staff feels that closure of the January subsistence deer hunting season would prevent subsistence hunters from meeting their subsistence needs. The proposer focused on two concerns for the regulation change; 1) the harvest of pregnant does, and 2) "fair chase".

The proposer argues that the proposal would prevent the harvest of does in January that "are three months along". There is no validity to this stance since there is no difference in harvesting does in November or December that may be one or two months along?

The proposer also uses the term "fair chase" which would refer to sport hunting. Subsistence is not about entertainment it's about putting food on the table.

If you have any questions regarding these comments I can be reached at (907)747-7469 or emailed at [illegible].

Sincerely

Jeff Feldpausch
Resource Protection Director
Sitka Tribe of Alaska

456 Katlian Street • Sitka, Alaska 99835 • (907) 747-3207 • Fax (907) 747-4915

GATES OF THE ARCTIC NATIONAL PARK
SUBSISTENCE RESOURCE COMMISSION
c/o 4175 Geist Road
Fairbanks, AK. 99709
(907) 455-0631 or FAX (907) 455-0501

July 18, 2011

Ms. Sue Entsminger, Chair
Eastern Interior RAC
c/o K.J. Mushovic
Council Coordinator
Office of Subsistence Management
U.S. Fish and Wildlife Service
1011 E. Tudor Road, Mail Stop 121
Anchorage, Alaska 99503

Dear Ms. Entsminger,

At our most recent meeting of the Gates of the Arctic NP Subsistence Resource Commission on May 11 & 12, 2011 in Shungnak, Alaska, the commission took the following positions regarding Federal Subsistence 2012 -2014 Wildlife Proposals:

WP12-01: Proposal to allow Federally qualified subsistence users the ability to sell handicraft articles made from the skin, hide, pelt, or fur, including claws of a brown bear taken from Units 1-5, 9A-C, 9E, 12, 17, 20, 22, 23, 24B (only that portion within Gates of the Arctic National Park), 25, or 26.
SRC Vote: Support
Justification: None

WP12-02: Proposal to change the "Designated Hunter" regulation.
SRC Vote: Support with the amendment to include widows.
Justification: The "Designated Hunter" option is important to traditional subsistence practices and ensuring that animals are harvested correctly.

Sincerely,

Pollock Simon Sr., Gates of the Arctic SRC Chair

Jack Reakoff, Gates of the Arctic SRC Vice-Chair

Pollock Simon, Sr. (Chairperson), Jack Reakoff (Vice-Chairperson), Levi Cleveland, Taqulik Hepa, Tim Fickus, Rachel Riley, Louie Commack, James Nageak, and Chris Zwolinski

Alaska Department of Fish and Game
Comments to RACs

Wildlife Proposal WP12-01: Develop a tracking program for federal subsistence harvested bear claws that are made into in to handicrafts for sale by federally qualified users.

Introduction: This proposal was a consensus outcome of the Brown Bear claw handicraft working group. The proposal requests all federal subsistence harvested brown bear claws, which are incorporated into handicrafts for sale, be tracked through use of the current department brown bear sealing program. If adopted, federal subsistence users who intend on selling brown bear claws incorporated into handicrafts will be required to have the bear hide sealed by the department. If adopted, a copy of the bear sealing document will be required to accompany the bear claw handicrafts when sold.

Sales of handicrafts made from brown bear claws, teeth, skulls, and bones present a particular problem, because these are potentially high value items, and allowing sales creates market incentives for illegal harvest in Alaska and other states. Adoption of this proposal will protect federal subsistence craftsmen and their clients by providing proof and a means of documenting their handicrafts were legally taken, legal to sale by federally qualified users only, and are legal to own by any customer. Additionally, if this proposal is adopted, the customers who purchase brown bear claw handicrafts from federally qualified users will have the security of written proof certifying the handicraft came from a legally harvested Alaskan brown bear, legally authorized harvester, and legally authorized artesian.

Changing federal regulation to provide documents which support the legal sales of federal subsistence harvested brown bear claw handicrafts should help eliminate illegal commercial markets and the masking of illegal sales in Alaska and elsewhere.

Impact on Subsistence Users: The Federal Subsistence Board's current allowance of brown bear handicraft sales was not based upon a determination that such sales are customary and traditional but instead upon the Board's unsupported argument that the Board can authorize any use if the take is customary and traditional (*see e.g.*, January 2, 2006, letter from Chairman Demientieff to Commissioner Campbell). Therefore, adoption of this proposal will not impact customary and traditional subsistence activities.

Adoption of this proposal will not interfere with continuing to allow federally qualified subsistence users to obtain such handicrafts for ceremonial, religious, and cultural purposes.

If adopted, federally qualified subsistence users who plan on selling handicrafts made from legally harvested brown bear claws will be required to have the hide sealed by the department, retain copies of the sealing certificate, and provide copies of the certificate to customers.

Opportunity Provided by State: Under 5 AAC 92.200, handicrafts made with bear fur may be sold to anyone, but sales of handicrafts made with claws, skulls, teeth, and bones are prohibited. Whole bear skins, with claws attached, taken in certain predator control areas may be sold under 5 AAC 92.031, but only after sealing and under terms of a permit issued for that bear skin.

Conservation Issues: The Federal Subsistence Board created a new market for bear claws and other high value bear parts which could readily masks illegal sales, thereby compounding problems with the international trade of Endangered Species and contributing to the illegal harvest, overharvest, and waste of bears in other states and countries, as well as Alaska. Markets for high value bear handicrafts create a conservation concern because brown bears are protected under the Endangered Species Act in other states and Mexico, and the origin of brown bear products cannot be determined by visual inspection. Brown bears are also listed on Appendix II of the Convention International Trade of Endangered Species (CITES).

In Alaska, economic incentives associated with harvesting brown bears to make handicrafts create conservation concerns because brown bears develop slowly and have a low reproductive rate, making small populations extremely susceptible to overharvest. Allowing widespread sale of high value bear parts without any kind of tracking mechanism is an invitation to illegal harvests. Further, the existing regulations are unenforceable and inconsistent with sound wildlife management principles.

Enforcement Issues: This proposal will reduce enforcement issues created by the existing federal regulation by creating a tracking system which provides documents to accompany brown bear claws used for making handicrafts legally taken, utilized, and sold under federal subsistence regulations. Further, adoption of this proposal will significantly reduce the likelihood that federally-qualified subsistence users will face state prosecution for engaging in sales that are prohibited under state law when they occur on state or private lands.

Jurisdiction Issues: The Federal Subsistence Board lacks jurisdiction to allow sales of any wildlife handicrafts when and where such sales are not customary and traditional. In the past, the Federal Board has rejected this argument, asserting that if any use is customary and traditional then the Board can authorize any other use. The Board's argument is inconsistent with its litigation stance in the Chistochina Unit 12 moose case where it argued that "customary and traditional use" is related to "how resources are used after they are taken," and not to or a prerequisite condition for the taking itself." *State v. Fleagle,* (Case 3:06-cv-00107-HRH) Doc. 32 at 22.

Other Comments: The department appreciates the cooperative work the brown bear claw work group completed over the last two years. Providing for tracking would be an important first step to addressing some of the Department's concerns regarding conservation and enforcement. If brown bear harvests can be tracked over time, and bear parts or handicrafts can be traced to reported legal harvests, conservation concerns will be less likely to arise and managers will be better able to determine if or when legal sales are contributing to illegal sales or otherwise creating conservation concerns.

Recommendation: Support.

Alaska Department of Fish and Game
Comments to RACs

Wildlife Proposal WP10-01 (Deferred WP08-05): Change the regulations regarding sale of brown bear handicrafts to allow sales of handicrafts made from brown bear fur in all units and to restrict sales of handicrafts made from claws, bones, teeth, or skulls to transactions between federally-qualified subsistence users.

Introduction: Existing federal regulations allow essentially unconstrained commercial sale of handicrafts made from bear parts taken in some units as a customary and traditional activity, despite a lack of substantial evidence demonstrating that such sales are a customary and traditional practice. The sale of such handicrafts is limited only by virtually unenforceable provision that prohibits sales constituting a "significant commercial enterprise." These regulations also allow the purchase of brown bear handicrafts by persons who are not federally-qualified subsistence users, despite such purchases being prohibited under state law and, as was pointed out at the Spring 2006 Federal Subsistence Board meeting, that sales can even occur over the Internet.

Sales of handicrafts made from brown bear claws, teeth, skulls, and bones present a particular problem, because these are potentially high value items, and allowing sales creates market incentives for illegal harvest in Alaska and other states.

Black bear handicraft sales, although not customary and traditional, do not create the high level of conservation concern raised by sales of brown bear handicrafts. Similarly, sales of brown bear handicrafts do not raise the same level of concern if limited to the skin or fur as defined in state regulations; and even sales of handicrafts made with claws and teeth do not currently raise extremely high levels of concern if limited to sales among federally-qualified users.

Changing the regulation to continue allowing the sale of brown bear fur products to anyone (state regulations allow sale of untanned brown bear hides), while limiting sales of handicrafts made with brown bear claws, teeth, bones, and skulls to sales to other federally-qualified subsistence users, should help eliminate commercial markets and the masking of illegal sales in Alaska and elsewhere. Unit specific restrictions on sales are almost impossible to enforce without tracking and documentation requirements and are not needed for lower value fur handicrafts. This proposal will eliminate the unit-specific sale allowances and render the regulations more user-friendly and more enforceable.

Impact on Subsistence Users: The Federal Subsistence Board's current allowance of brown bear handicraft sales was not based upon a determination that such sales are customary and traditional but instead upon the Board's unsupported argument that the Board can authorize any use if the take is customary and traditional (*see e.g.*, January 2, 2006, letter from Chairman Demientieff to Commissioner Campbell). Therefore, adoption of this proposal will not impact customary and traditional subsistence activities.

This proposal will continue to allow rural residents to: sell brown bear fur handicrafts to anyone (as allowed under State law); barter brown bear handicrafts with anyone under federal regulations; and sell brown bear handicrafts to other rural residents under federal regulations. Therefore, this proposed regulation change will not impair the ability of rural residents or urban Alaska Natives to obtain such handicrafts for ceremonial, religious, and cultural purposes.

Further, adoption of this proposal will significantly reduce the likelihood that federally-qualified subsistence users will face state prosecution for engaging in sales that are prohibited under state law when they occur on state or private lands.

Opportunity Provided by State: Under 5 AAC 92.200, handicrafts made with bear fur may be sold to anyone, but sales of handicrafts made with claws, skulls, teeth, and bones are prohibited. Whole bear skins, with claws attached, taken in certain predator control areas may be sold under 5 AAC 92.031, but only after sealing and under terms of a permit issued for that bear skin.

Conservation Issues: The Federal Subsistence Board created a new market for bear claws and other high value bear parts which could readily masks illegal sales, thereby compounding problems with the international trade of Endangered Species and contributing to the illegal harvest, overharvest, and waste of bears in other states and countries, as well as Alaska. Markets for high value bear handicrafts create a conservation concern because brown bears are protected under the Endangered Species Act in other states and Mexico, and the origin of brown bear products cannot be determined by visual inspection. Brown bears are also listed on Appendix II of the Convention International Trade of Endangered Species (CITES).

In Alaska, economic incentives associated with harvesting brown bears to make handicrafts create conservation concerns because brown bears develop slowly and have a low reproductive rate, making small populations extremely susceptible to overharvest. Allowing widespread sale of high value bear parts without any kind of tracking mechanism is an invitation to illegal harvests. Further, the existing regulations are unenforceable and inconsistent with sound wildlife management principles.

Enforcement Issues: This proposal will reduce enforcement issues created by the existing federal regulation in several ways: (1) by limiting the pool of eligible purchasers for high value bear parts, it will significantly reduce economic incentives for poaching in other states and countries as well as in Alaska; (2) by allowing the sales of brown bear fur handicrafts from any Game Management Unit, as presently allowed under state law, this proposal will eliminate unenforceable Unit-specific sales authorizations in existing regulation; and (3) the proposed regulation will reduce the likelihood that federally-qualified subsistence users will face prosecution for attempting to engage in sales on state or private lands that are prohibited under state law.

Jurisdiction Issues: The Federal Subsistence Board lacks jurisdiction to allow sales of any wildlife handicrafts when and where such sales are not customary and traditional. In the past, the Federal Board has rejected this argument, asserting that if any use is customary and traditional then the Board can authorize any other use. The Board's argument is inconsistent with its litigation stance in the Chistochina Unit 12 moose case where it argued that "customary and traditional use" is related to "how resources are used after they are taken," and not to or a prerequisite condition for the taking itself." *State v. Fleagle,* (Case 3:06-cv-00107-HRH) Doc. 32 at 22.

Recommendation: TAKE NO ACTION / GRANT PERMISSION TO WITHDRAW / DEFER TO PROPOSAL 12-01 AS RECOMMENDED BY WORKING GROUP

Alaska Department of Fish and Game
Comments to Regional Advisory Council

Wildlife Proposal WP12-02: Change federal subsistence designated hunter regulations.

Introduction: This proposal seeks to change the statewide federal subsistence designated hunter regulation by specifying the qualifications for the recipient of harvest. The proposal requests federal regulations be changed to require that federal subsistence designated hunters only harvest for federally qualified recipients 60 years of age or older or for a person who is disabled.

The proponent indicates the federal subsistence designated hunter program has diverged from the original intent of the Federal Subsistence Board by allowing designated hunting to provide for elders and others that were unable to hunt for themselves. The proponent indicates the designated hunter program is currently an uncontrolled system. The proponent indicates some federal subsistence users are abusing this regulation and are harvesting as many animals as numbers of permits they can obtain which may lead to detrimental impacts to game populations and subsistence hunting in general.

Impact on Subsistence Users: If adopted, federally qualified subsistence designated hunters could harvest animal for federally qualified users 60 years of age or older or are disabled. If adopted, some federally qualified subsistence super harvesters may expend additional time locating and obtaining game tags from qualified designated hunter beneficiaries. If adopted, designated hunters who cannot locate federally qualified users 60 or over or are disabled may harvest fewer animals per year.

Opportunity Provided by State: Proxy hunting for big game is authorized in state hunting regulation. State proxy hunting is allowed for moose, caribou, and deer. The state proxy hunting beneficiary requirements include being a resident of Alaska who is blind, 70% physically disabled, or 65 years of age or older. Proxy hunters may not proxy hunt for more than one beneficiary at a time and may have only one Proxy Authorization with them in the field at a time.

Conservation Issues: Undetermined at this time. If this proposal is adopted without modifications many more animals may be harvested than anticipated.

Enforcement Issues: If adopted, this proposal would bring federal and state regulations closer to alignment.

Recommendation: Support with modification.
Adopt the proposal with modification to establish designated hunter beneficiary qualifications equal to those approved by the Federal Subsistence Board for Unit 6. The State recommends modifying this proposal to require beneficiaries of the federal subsistence designated hunters be blind, 65 years old or older, at least 70% disabled, or temporarily disabled. The State also recommends modifying this proposal to reflect the Unit 6 designated hunter possession limit adopted by the Federal Subsistence Board which to limits designated hunters to possession of only one bag limit at a time. Adoption of these recommended proposal modification will bring regulatory consistency to Units 1 through 6 and make federal and state regulations more parallel.

Alaska Department of Fish and Game
Comments to Regional Advisory Council

Wildlife Proposal WP12-03: Incidental harvest requires moving traps for regulatory year. This proposal was submitted by the Orutsararmiut Native Council.

Introduction: The proposer seeks to require trappers to move a trap that incidentally harvests a moose, caribou, or deer at least 300 feet for the remainder of the regulatory year. Trappers would also be required to salvage the edible meat and turn it over to the Federal inseason wildlife manager.

Impact on Subsistence Users: Federal subsistence users would be required to move a trap when it has taken a moose, caribou, or deer incidental to trapping furbearers for the remainder of the regulatory year, and surrender their meat specifically to the Federal inseason wildlife manager.

Opportunity Provided by State:

5 AAC 92.085. Unlawful methods of taking big game; exceptions
The following methods and means of taking big game are prohibited in addition to the prohibitions in 5 AAC 92.080:

(6) with the use of a trap or snare . . . .

5 AAC 92.095. Unlawful methods of taking furbearers; exceptions
a) The following methods and means of taking furbearers under a trapping license are prohibited, in addition to the prohibitions in 5 AAC 92.080:

(12) by placing or leaving an active trap or snare set on land that is within 300 feet of the site at which a moose, caribou, or deer was taken using a trap or snare; this prohibition applies for the duration of the regulatory year in which the moose, caribou, or deer was taken using the trap or snare.

Conservation Issues: None identified nor solved by adoption of this proposal.

Enforcement Issues: This proposal is purported to have been submitted in response to previous confusion by enforcement personnel. The state understands local enforcement personnel have received updated training as a result of reported events surrounding this issue. Failure to adopt this proposal is not expected to contribute to continued enforcement issues.

Other Comments: This proposal is likely unnecessary given that if this proposal is not adopted, Federally qualified subsistence users would continue to be required to comply with the State regulations requiring that when a caribou, moose, or deer are harvested incidentally, the trap must be moved at least 300 feet for the remainder of the regulatory year, or risk receiving a State citation.

Recommendation: Oppose

Alaska Department of Fish and Game
Comments to RAC

Wildlife Proposal WP12-22: This proposal requests a customary and traditional use determination for residents of Ninilchik for brown bear in Units 15A, 15B, and 8. The proposal also requests federal subsistence brown bear hunt management regulations be changed for Unit 15.

Introduction: This proposal was submitted to expand the current customary and traditional use determination for the residents of Ninilchik for brown bear in Units 15A and B on the Kenai Peninsula and in Unit 8 in the Kodiak Island archipelago. The proposal also requests modification of the current federal subsistence brown bear hunt management to establish a permanently opened season in Unit 15 which may be closed by the Kenai National Wildlife Refuge Manager in consultation with the Alaska Department of Fish and Game and the chair of the South Central Alaska federal subsistence Regional Advisory Council when necessary. This proposed change differs from existing regulation because currently the federal subsistence brown bear regulations for Unit 15 states the Refuge Manager may open or close the season by announcement.

Impact on Subsistence Users: Adoption of this proposal will provide a significant increase in opportunity for the residents of Ninilchik to harvest brown bears under federal subsistence regulations. Adoption of this proposal will provide opportunity for residents of Ninilchik to participate a federal subsistence brown bear hunt in Units 15A and B as well as in Unit 8 where the residents of Ninilchik currently do not have a customary and traditional use determination. Adoption of the portion of the proposal restricting the Refuge Manager's ability to open the season is not expected to impact federal subsistence users. A positive C&T finding only for those mentioned may unnecessarily exclude other users.

Opportunity Provided by State: The State brown bear hunt in Unit 15 follows:

> Residents and non-residents are allowed one brown bear every 4 regulatory years by drawing permit. The fall season is from September 15 through November 30 (DB303/305) and the spring season is from April 1 through June 15 (DB307/309).

Conservation Issues: Yet to be determined

Enforcement Issues: Differences in federal and State regulations resulting from adoption of this proposal will create enforcement issues in areas with mixed land ownership.

Other Comments: The questions posed in this proposal should be bifurcated. Ability to provide an open until closed status should be determined independently of a Customary & Traditional determination for this population. A positive C&T finding only for those mentioned may unnecessarily exclude other users.

Recommendation: Modify.

Alaska Department of Fish and Game
Comments to Regional Advisory Council

Wildlife Proposal WP12-28: Authorize the harvest of one either sex moose in Unit 6 B or C for the annual Native Village of Eyak Memorial/Sobriety Day Potlatch.

Introduction: This proposal was submitted to change the federal subsistence moose hunting permit conditions issued by the Cordova District Range to the Native Village of Eyak to all harvest of either sex moose for an annual potlatch. The current permit stipulates only one bull may be harvested by a federal subsistence designated hunters. The proponent requests changing the permit to allow the harvest of either sex moose because of difficulties harvesting a bull moose for the event in 2009 and 2010.

Opportunity Provided by State: Opportunity is provided by the state under State of Alaska regulations 5 AAC 92.034, Alaska Department of Fish and Game "may issue a permit for the taking of game for the teaching and preservation of historic or traditional Alaskan cultural practices, knowledge, and values…" No requests for a permit for this memorial event have ever been submitted to the Department but likely would have been approved.

Conservation Issues: This proposal presents no conservation concerns.

Other Comments: The existing state permit applies to all lands. Use of State permits reduces land status confusion issues associated with ceremonial permits. The Alaska Department of Fish and Game is concerned that the current process for addressing cultural or ceremonial permit requests The applicant should be notified of the availability for cultural or ceremonial permits from the State. A better understanding is also needed of the basis for issuance of cultural or ceremonial permits within the federal responsibility to provide subsistence use of fish and wildlife.

Enforcement Issues: Adoption of this proposal will continue divergent federal and state hunting regulations in Unit 6. Enforcement issues in areas with mixed land ownership will also continue. Additionally, the department recommends federal land managers issue detailed maps to federal subsistence hunters depiction the boundaries of federal public lands located in Unit 6B and C to ensure hunters are not inadvertently hunting on non-federal public lands as these lands boarder most of the Cordova road system.

Recommendation: Oppose as this opportunity is already provided for by the State of Alaska and has not been utilized.

Alaska Department of Fish and Game
Comments to Regional Advisory Council

Wildlife Proposal WP12-33: Shorten the federal subsistence wolf hunting season in Units 11 and that portion of Unit 12 not part of the state's predator control program from current season dates of August 10 through April 30 to November 1 through March 31. This proposal is identical to WP10-38 rejected by the Federal Subsistence Board in 2010.

Introduction: This proposal assumes federal subsistence wolf hunting seasons opening August 10 are solely for predator control. August openings are traditional, allowing federal and state subsistence hunters the opportunity to take a wolf while hunting other big game. Hide value depends on what the wolf will be used for.

Impact on Subsistence Users: Adoption of this proposal would unnecessarily restrict the opportunity to take a wolf for subsistence while big game hunting, specifically during the fall. This loss of fall hunting opportunity could seriously impact subsistence users who have limited means to hunt during winter months.

Opportunity Provided by State: The State provides an August 1 through April 30 hunting season with a bag limit of 5 wolves in Unit 11 and an August 10 through May 31 hunting season also with a bag limit of 5 wolves in Unit 12.

Conservation Issues: Current seasons and bag limits for wolf hunting in Units 11 and 12 have virtually no impact on wolf numbers. Since 1999, an average of two wolves per year were taken in Unit 11 and seven in Unit 12 by hunting. Hunting accounts for approximately 11% of the total wolf take in Unit 11 and 2% of the total wolf take in Unit 12. Wolf numbers and total harvests have been relatively stable in both units for many years, and there are no current conservation concerns.

Fall wolf population estimates in Unit 11 ranged from 78-122 since the mid 1990s. For the size of the unit (33,112 km^2), this represents a very low natural density of wolves (3.3-3.6 wolves / 1,000 km^2). Given the amount of high elevation terrain in Unit 11, the actual density of wolves in available wolf habitat is slightly higher. The annual harvest rate in Unit 11 since 2001 has averaged 19% (range = 12-24%), well within the range of sustainability regardless of the long hunting and trapping seasons. This stable pattern is due to the low density dynamic equilibrium predator/prey situation among wolves, moose, caribou, and sheep in the area.

The current fall wolf population estimate in Unit 12 is 179–192 wolves (7–7.5 wolves/1,000 km^2). Despite active wolf reduction efforts in a portion of northern Unit 12 and in neighboring units, the minimum fall population of wolves residing entirely within Unit 12 has changed little since 1998. Harvest rates in Unit 12 have been <24% since 1998, well within the range of sustainability. Wolf numbers in Unit 12 have also benefited from higher numbers of Fortymile caribou since 1997, increasing migrating Nelchina caribou, and highs in snowshoe hare cycles in 1998–2001 and 2007–2009.

The proposer states that adjacent Unit 13 and 20E have very low wolf densities due to active predator management. While wolves have been reduced in Unit 13 in recent years, it was not by 80% as the proposer suggests. The unit-wide fall wolf density in Unit 13 has been reduced approximately 50% between 1999 (520 wolves, pre-control) and 2009 (273 wolves); and wolf population objectives are currently being met. For comparison to other units, the most recent fall density of wolves for all of Unit 13 was 4.5 wolves / 1,000 km^2 in 2008.

It is very important to note the difference between fall and spring wolf estimates when discussing wolf population dynamics and comparing areas. Wolf populations decline over the course of a winter due to human take, natural mortality, and dispersal; spring estimates do not yet include new pups. Wolf control areas are evaluated based on spring estimates. The most recent spring estimates for wolves in Unit 13 and the Upper Yukon-Tanana Wolf Predation Control Area in Unit 20E are 2.4 and 3.3 wolves/1,000 km^2 respectively. (These estimates are unit-wide and are not based on available habitat.)

Although Units 13 and 20E have active wolf management programs, the wolf population dynamics of Units 11 and 12 are not significantly affected by these activities. Shortening the wolf hunting or trapping seasons in Units 11 and 12 at this time would have no effect on the wolf populations in these areas. The current hunting seasons are sustainable and allow federal subsistence hunters to take wolves opportunistically.

Enforcement Issues: Significant differences in federal and State regulations resulting from adoption of this proposal would create enforcement issues in areas with mixed land ownership, as well as lands such as the Tetlin Refuge and the Wrangell-St. Elias Preserve where both State and federal regulations apply.

Other Comments: It is unlikely that all adults would be taken out of a pack by the hunting addressed in this proposal. Adults have learned to avoid man through experience and are the most difficult pack members to take, while pups are the most vulnerable pack members to harvest. Pup starvation is unlikely even if some adults are taken. Wolves have evolved and thrived under natural conditions where adult mortality occurs regularly through intraspecific competition. Also, older adults kill large prey, thus are subject to injury and death. In cases of natural adult mortality, the pack social structure provides a continuation of normal pack behavior and support to pups.

Recommendation: Oppose.

Alaska Department of Fish and Game
Comments to Regional Advisory Council

Wildlife Proposal WP12-34: This proposal shortens the federal subsistence wolf hunting season in Unit 13D by 113 days with season dates changed from August 10 through April 30 to November 1 through March 31.

Introduction: This proposal was submitted to reduce the federal subsistence wolf hunting season in Unit 13D to prevent harvest of pregnant females, prevent yearlings without adult mortalities, prevent discard of harvested hides, and increase wolf reproduction rates. This proposal incorrectly assumes federal subsistence wolf hunting seasons opening August 10 are solely for predator control and were established to benefit prey species. August openings are traditional, allowing federal and state subsistence hunters the opportunity to take a wolf while hunting other big game. Hide value depends on what the wolf will be used for.

Impact on Subsistence Users: Adoption of this proposal would unnecessarily restrict the opportunity to take a wolf for subsistence while big game hunting, specifically during the fall. This loss of fall hunting opportunity could seriously impact subsistence users who have limited means to hunt during winter months.

Opportunity Provided by State: The State provides an August 10 through April 30 hunting season with a bag limit of 10 wolves in Unit 13D.

Conservation Issues: Wolf numbers in 13D are not controlled under a predator management program and wolf numbers are stable. Unit 13D was not included in the predator program because it is heavily timbered which makes airplane based management very difficult. However, wolves are important predators in 13D, with sheep and moose numbers low enough to be impacted by wolf predation. Since 2001, the average annual take of wolves in 13D has been 23% (range = 9% – 38%). It is well documented that this range is sustainable. The long season dates provide maximum opportunity for hunters and have no impact on population health in 13D.

Enforcement Issues: Differences in federal and State regulations resulting from adoption of these proposals will create enforcement issues in areas with mixed land ownership.

Other Comments: It is unlikely that all adults would be taken out of a pack by federal subsistence hunters addressed in this proposal. Adults have learned to avoid man through experience and are the most difficult pack members to take, while pups are the most vulnerable pack members to harvest. Pup starvation is unlikely even if some adults are taken. Wolves have evolved and thrived under natural conditions where adult mortality occurs regularly through intraspecific competition. Also, older adults kill large prey, thus are subject to injury and death. In cases of natural adult mortality, the pack social structure provides support to pups.

Recommendation: Oppose

Alaska Department of Fish and Game
Comments to Regional Advisory Council

Wildlife Proposal WP12-35: This proposal requests the federal subsistence wolf hunting season in Unit 14C be closed.

Wildlife Proposal WP12-36: This proposal requests the federal subsistence wolf trapping season in Unit 14C be closed.

Introduction: The proponent requests the Federal Subsistence Board close both federal subsistence wolf hunting and trapping in Unit 14C to increase the value of the resource for wildlife viewers, workers who commute to Anchorage, and urban residents that do not hunt. The proponent justifies these proposals by feeling the wolf population in Unit 14C is much more valuable to wildlife viewers than federal subsistence users. Additionally, the proponent incorrectly assumes federal subsistence wolf hunting and trapping seasons and bag limits in Unit 14C were established to benefit prey species.

Impact on Subsistence Users: Adoption of these proposals would have an unknown impact as the department is unaware if federal subsistence wolf hunting or trapping effort and harvest in 14C is tracked by federal land managers. If these proposals are adopted, federal subsistence users would be required to hunt and trap wolves in 14C under state regulation.

Opportunity Provided by State: In Unit 14C, the state wolf trapping season is from November 10 through February 28 with no annual limit. In Unit 14C, the state wolf hunting season is from August 10 through April 30 with an annual limit of five wolves.

Conservation Issues: Based on an aerial survey in 1995 and anecdotal reports, the department estimates Unit 14C has at least 25-30 wolves in 4-5 packs. One pack uses the Twentymile River drainage in the southeastern corner of the subunit, which is in Chugach National Forest. The territory of a second pack from the Kenai Peninsula may occasionally include the Twentymile River drainage. Fur sealing records indicate 37 wolves were sealed from Unit 14C during 1984–2007. Eleven of these wolves were harvested in the Twentymile River drainage. Nearly half of the wolves (16/37) were taken by hunters and 6 of these wolves were shot in the Twentymile River drainage. Thus, in the past 24 years an average of 1.5 wolves per year were reported harvested by all methods, including 4 killed by vehicles, in Unit 14C. A wolf population of 25-30 individuals will not be reduced by annual harvest rates of 1.5 wolves (5-6%). Since statehood, there has been no effort to reduce wolf populations in Unit 14C under the state's predator control programs. Wolf hunting and trapping is prohibited in adjacent Chugach State Park and on the local military reservations, which provide a refugium for one of the subunit's packs and partial refugium for at least two other packs.

Other Comments: The department does not possess documentation of federal subsistence activities targeting wolves in Unit 14C as federal agencies have not shared any wolf related data regarding harvest or effort for the federal subsistence program with the department's wildlife managers responsible for sound management of all Unit 14 wildlife resources. The department is still awaiting the last 21 years of 14C federal subsistence wolf harvest and effort data.

Enforcement Issues: If adopted, enforcement issue would be reduced or eliminated as all wolf hunting and trapping in Unit 14C would be governed by state regulation.

Recommendation: Oppose.

Alaska Department of Fish and Game
Comments to Regional Advisory Council

Wildlife Proposal WP12-71: This proposal requests liberalizing the federal subsistence fall moose hunting season dates in Unit 12. The proposal also requests development and requirement of a joint State-Federal registration permit. The portion of Unit 12 impacted by this proposal is not clearly stated but these comments will only address that portion within the Tetlin National Wildlife Refuge and those lands within the Wrangell-St. Elias National Preserve north and east of a line formed by Pickerel Lake Winter Trail from the Canadian border to Pickerel Lake.

Introduction: This proposal was submitted to change the federal subsistence moose hunting fall season dates in Unit 12 by changing the current two separate seasons into one longer season. If adopted, the Unit 12 federal subsistence fall hunting season would change from August 24 through August 28 and September 8 through September 17 to August 24 through September 20. The proponent indicates the current federal subsistence season does not benefit federally qualified users. The proponent indicates changing the current split season into one continuous season and adding liberalizing the hunting season by an additional 13 days would make it easier for federal subsistence users to harvest a moose. The proponent also indicates adoption of this proposal will legalize the current illegal out of season harvest by federal subsistence users between the existing seasons.

The proposal also requests requiring a joint State-Federal registration permit instead of the currently required state harvest ticket. While requiring a registration permit could improve harvest reporting accuracy, it is likely to create confusion among state hunters hunting along the main river corridors in this area, which pass in and out of the Tetlin NWR along their length. Requiring a registration permit on the Tetlin NWR would require state hunters to possess both a harvest ticket and a registration permit to hunt the entire length of these rivers.

Impact on Subsistence Users: Adoption of this proposal will result in a combination of 13 additional days of opportunity for federal subsistence users by opening the currently closed 12-day period between seasons and extending the season end date by three days. Adoption of this proposal will also require federal subsistence users to obtain a joint state-federal registration permit.

Opportunity Provided by State: State regulations for that identified area of Unit 12 follow:

> Resident hunters are allowed one bull with spike-fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side by harvest ticket from August 24 through August 28 or September 8 through September 17.
>
> Resident hunters who choose to participate in the community hunt are allowed one bull with spike-fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side by community harvest permit (CM300) from September 8 through September 17.

Non-resident hunters are allowed one bull with spike-fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side by harvest ticket from September 8 through September 17.

Conservation Issues: The most recent moose survey in this area was conducted in fall of 2008 by the Tetlin NWR, in coordination with ADF&G. The moose population estimate in this survey area increased from 844 moose in 2000 to 1,843 in 2008. The bull:cow ratio in 2008 was 61.7 bulls:100 cows, indicating hunting was likely having little if any impact on the population. The calf:cow ratio in 2008 was 24.5 calves:100 cows. The fall harvest on the Tetlin Refuge during 2001–2010 was 12-32 bull moose, with an average harvest of 20 bulls per year. The annual moose harvest on the Tetlin Refuge is likely to increase by 5-10% (1 to 2 bulls) with the proposed changes, but is unlikely to impact the moose population. Therefore there are no conservation concerns associated with this proposal.

Enforcement Issues: Adoption of this proposal will create divergent federal and state moose hunting season dates which will increase enforcement issues in areas with mixed land ownership. Additionally, the department recommends federal land managers issue detailed maps to federal subsistence hunters depiction the boundaries of federal public lands located in Unit 12 to ensure hunters are not hunting out of season on non-federal public lands.

Recommendation: Oppose. The state supports alignment of state and federal seasons whenever possible to reduce hunter confusion and enforcement issues. If the proposal is adopted, the state recommends the hunt be administered through a federal registration permit on the Tetlin NWR only, to reduce enforcement issues and confusion among state hunters.

Alaska Department of Fish and Game
Comments to Regional Advisory Counicl

Wildlife Proposal WP12-72: This proposal requests significant liberalization of the federal subsistence moose hunting season dates in Unit 12. This proposal, in conjunction with WP12-71, also requests development and requirement of a joint State-Federal registration permit. The portion of Unit 12 impacted by this proposal is not clearly identified but these comments will only address that portion within the Tetlin National Wildlife Refuge and those lands within the Wrangell-St. Elias National Preserve north and east of a line formed by Pickerel Lake Winter Trail from the Canadian border to Pickerel Lake because it is the only area with an existing federal subsistence moose hunt within Unit 12.

Introduction: This proposal was submitted to liberalize the federal subsistence moose hunting winter season dates by extending the season for 120 days per year. The proposed season date changes for federal subsistence moose hunting season in the identified area of Unit 12 is from November 20 through December 20 to November 1 through March 31 (487% increase). The proponent indicates the proposal is necessary because moose seasonally move off of federal public lands to higher elevations during the current federally subsistence moose hunting winter season dates. The proponent indicates starting the season 20 days earlier in November will provide some opportunity to harvest moose that have not migrated off of federal public lands and extending the season end date by 89 days will allow opportunity to harvest moose that have migrated back onto federal public lands. Additionally, the proponent indicates extending the season into March will increase snowmachine access to parts of federal public lands that have received little hunting in the past due to inaccessibility without good snow conditions.

The proposal also requests requiring a joint State-Federal registration permit instead of the currently required state harvest ticket. While requiring a registration permit could improve harvest reporting accuracy with no state season during this period, it is not necessary to have a joint permit.

Impact on Subsistence Users: Adoption of this proposal will result in a significant increase in additional days of opportunity for federal subsistence users to harvest moose. Adoption of the proposal could allow federal subsistence users access to moose in areas and times of year previously unavailable. Adoption of this proposal will also require federal subsistence users to obtain a joint state-federal registration permit.

Additionally, bull moose shed their antlers by late December and if this proposal is adopted, little of any additional harvest opportunity will be provided to federal subsistence users targeting antlered moosed during the months of January through March.

Opportunity Provided by State: State regulations for that identified area of Unit 12 follow:

> Resident hunters are allowed one bull with spike-fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side by harvest ticket from August 24 through August 28 or September 8 through September 17.

Resident hunters who choose to participate in the community hunt are allowed one bull with spike-fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side by community harvest permit (CM300) from September 8 through September 17.

Non-resident hunters are allowed one bull with spike-fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side by harvest ticket from September 8 through September 17.

Conservation Issues: The most recent moose survey in this area was conducted in fall of 2008 by the Tetlin NWR, in coordination with ADF&G. The moose population estimate in this survey area increased from 844 moose in 2000 to 1,843 in 2008. The bull:cow ratio in 2008 was 61.7 bulls:100 cows, indicating hunting was likely having little if any impact on the population. The calf:cow ratio in 2008 was 24.5 calves:100 cows. The fall harvest on the Tetlin Refuge during 2001–2010 was 12-32 bull moose, with an average harvest of 20 bulls per year. This area is very difficult to access during the winter season and most bulls shed their antlers by late December. With a bag limit of 1 "antlered" bull, very few bulls will legal to harvest during nearly the entire proposed season extension. The annual moose harvest on the Tetlin Refuge is likely to increase by no more than 1 or 2 bulls annually with the proposed changes and is unlikely to impact the moose population. Therefore there are no conservation concerns associated with this proposal.

Enforcement Issues: Adoption of this proposal will expand divergent federal and state moose hunting season dates which will increase enforcement issues in areas with mixed land ownership. Additionally, the department recommends federal land managers issue detailed maps to federal subsistence hunters depiction the boundaries of federal public lands located in Unit 12 to ensure hunters are not hunting out of season on non-federal public lands.

Recommendation: Oppose. The state supports alignment of state and federal seasons whenever possible to reduce hunter confusion and enforcement issues. If the proposal is adopted, the state recommends the hunt be administered through a federal registration permit on the Tetlin NWR only, as there is no state season during this time of year in this area.

Alaska Department of Fish and Game
Comments to Regional Advisory Council

Wildlife Proposal WP112-75: This proposal would extend the federal subsistence moose season in portions of Unit 20E.

Introduction: This proposal would lengthen the recently liberalized federal subsistence moose season in that portion of Unit 20E drained by the Middle Fork of the Fortymile River upstream from and including the Joseph Creek drainage from August 24 through September 25 to August 20 through September 30 (27% increase). If adopted, this proposal would also lengthen the federal subsistence moose hunt in Unit 20E Remainder from August 24 through September 25 to August 24 through September 30 (15% increase). The proponent indicates adoption of this proposal would provide greater opportunity and time for federal subsistence moose hunters in this area. The proponent also indicates adoption of this proposal would match the season closure dates for all of Unit 20E as well as the start date for two of the three areas.

Impact on Subsistence Users: Extending the season in August and September in the portion of Unit 20E drained by the Middle Fork of the Fortymile River upstream from and including the Joseph Creek drainage would likely increase the Unit 20E moose harvest by federal subsistence users by a few moose annually, as would extending the end of the season an additional 5 days for the Unit 20E Remainder.

Opportunity Provided by State: The state moose hunting regulations for the applicable portions of Unit 20E follows:

> Residents are allowed on bull by harvest ticket for that portion of 20E consisting of the drainages of the Middle Fork of the Fortymile River upstream from and including the Joseph Creek drainage from August 24 through August 28 or from September 8 through September 17. Non-residents may take one bull with 50-inch anglers or with 4 or more brow tines on one side between September 8 and September 17.
>
> Residents are allowed one bull by registration permit (RM865) for Unit 20E Remainder from August 24 through August 28 or from September 8 through September 17 or one bull by drawing permit (DM796) in the Ladue River Controlled Use Area from November 1 through November 30. Non-residents may harvest one bull with 50-inch antlers or antlers with 4 or more brown tines on at least one side by registration permit (RM865) from September 8 through September 17.

Conservation Issues: The proposed liberalization of the August season would likely increase the Unit 20E moose harvest by federal subsistence users by a few moose annually likely without an effect on the moose population. A relatively small increase in harvest is expected because federal season liberalizations that occurred in 2010 resulted

in harvest of only 3 additional moose, and because there is very little federal land in Unit 20E that is easily accessible.

Enforcement Issues: Differing federal and state season dates present enforcement complications. An open federal subsistence season during a state season closure could allow a hunter to harvest a moose on state land when the season is closed and claim it was taken on federal land.

Other Comments: The department supports these season extensions, but recommends close monitoring of the harvest over the next several years until impact of the change is more fully understood.

Recommendation: Support.

U.S. FISH and WILDLIFE SERVICE
BUREAU of LAND MANAGEMENT
NATIONAL PARK SERVICE
BUREAU of INDIAN AFFAIRS

Federal Subsistence Board
1011 E. Tudor Rd., MS 121
Anchorage, Alaska 99503-6199

U.S. FOREST SERVICE

SEP 2 1 2011

FWS/OSM11084.TJ

Mr. Ralph Lohse, Chair
Southcentral Alaska Subsistence
Regional Advisory Council
Post Office Box 14
Cordova, Alaska 99574

Dear Mr. Lohse:

This letter responds to the Southcentral Alaska Subsistence Regional Advisory Council's 2010 Annual Report. The Federal Subsistence Board appreciates your effort in developing the Annual Report and values the opportunity to review the issues brought forward concerning your region. Annual Reports allow the Board to become more aware of the issues that fall outside the regulatory process and affect subsistence users in your region.

The responsibility to respond to these reports has been delegated to the Board by the Secretaries of the Interior and Agriculture. The Board has reviewed your Annual Report and offers the following responses.

Issue 1: Secretarial Review

The Council wishes to thank all of those involved in the Secretarial Review of the Federal Subsistence Management Program for their time and efforts, and supports implementation of all the Secretarial Subsistence Management Program Review items as expediently as practical. The Council is particularly interested in being involved in the review of deference to councils related to issues beyond take, customary and traditional use determinations, and rural determinations, and encourages the solicitation of involvement from and our interaction with the other regional advisory councils, as well. Enclosed and incorporated into this report are portions of the Council's October 2010 and March 2011 meeting transcripts in which the Council discusses items related to the Secretarial Review. It is the Council's intent that all of its comments be considered.

Council members recommended that the two proposed Federal Subsistence Board seats receive adequate staff support. Council members suggested that the seats terms be staggered and to consider regulatory changes to allow for the use of alternates. Most, but not all, recommended that selection be considered from a pool of current or former subsistence user council members,

or council chairs, or Subsistence Resource Commission members, and that the value that a candidate with a tribal connection would bring to the Board is considered. Suggestions for eligibility criteria include: knowledgeable about and active (or formerly active) in subsistence activities, knowledgeable about (or has participated in) tribal activities, and no record of violations. While acknowledging that regulatory change would be required, the Council suggested applying its criteria suggestions to all three public seats. There was a suggestion to bring all ten Regional Advisory Councils together to form a nomination body for the seats. Council members also suggested that regulations be changed to allow agency members to appoint knowledgeable designees to represent them on the Board.

The Council appreciates the effort made by the Board to involve Council chairs as it begins to take up the rural determination process, and encourages continued involvement of the councils in that process as well as customary and traditional use determinations. Our Council has had discussions about considering school district attendance, normal, expected population growth, and evaluating each community in Alaska statewide by the same standards.

The Council supports the Memorandum of Understanding for Coordinated Interagency Fish and Wildlife Management for Subsistence Uses on Federal Public Lands in Alaska as an essential tool for working cooperatively, but feels that the wording of paragraph 3 in Section IV of the Memorandum should be clarified so that it does not appear that the Federal signatories agree with or support Alaska Statue 16.05.258. There is a need to better recognize the validity of traditional ecological knowledge, re-enforce meaningful tribal consultation, and increase Federal support of active management of fish and game resources to produce more fish and game for the benefit of subsistence users. In order to improve the quality of data, Federal and State harvest reporting should be consistent, timely, and accurate. There was a desire to see the Alaska Board of Fisheries give more credence to its advisory committees, as well as for the Federal Subsistence Board to give more deference to council recommendations when contrary to Alaska Department of Fish and Game opinion. There was support expressed for the suggestions to modify the preamble made by the Western Interior Alaska Subsistence Regional Advisory Council.

In the past, regional advisory councils have been told that councils may not file a Request for Reconsideration with the Federal Subsistence Board, as a council cannot be considered an aggrieved party. However, this Council proposes that in instances when the Board does not defer to a council recommendation, a council could be considered an aggrieved party.

Response

The Board appreciates the Council's concerns and recommendations. The Board will seek input from the Council on any discussions involving review of deference to Councils related to issues beyond take, customary and traditional use determinations, and the rural determination process. The rural determination process has not yet been initiated; however, once it has, the Regional Advisory Councils will be involved in the process.

The Board has forwarded the Council's recommendations on the Secretarial Review items to the Secretaries of the Interior and Agriculture for their consideration.

The Board would like to acknowledge the Council's review of the Memorandum of Understanding (MOU). The Board will be meeting in the future with the State to discuss the MOU. If there are any revisions, the Councils will have an opportunity to provide comments and recommendations.

The regulations on requests for reconsideration (RFR) can be found in 36 CFR 242.20 and 50 CFR 100.20 and specify that regulations in subparts C and D are subject to requests for reconsideration and that any aggrieved party may submit such a request to the Board. Since the Regional Advisory Councils are advisory bodies to the Board and part of the Federal Subsistence Management Program, they do not have any standing as an aggrieved party. Therefore, Councils may not submit RFRs.

Issue 2: Regulatory Change to Blood Quantum Definition

The Council supports pursuit of regulatory changes to the definition of "Native" in the Code of Federal Regulations. The Council suggests replacing blood quantum requirements with recognition of those with any lineal descent as eligible to create handicrafts from certain resources. The Council recommends the language of Alaska's "Silver Hand" program and the Alaska Federation of Natives resolution on this issue for examples of how the current regulatory wording could be revised.

Response

We appreciate your concern with the blood quantum requirements in some regulations when defining Natives; however, this concern is outside of the purview of the Federal Subsistence Board. The guiding statute, the Alaska National Interest Lands Conservation Act (ANILCA), provides a subsistence priority for rural Alaskans.

Issue 3: Wildlife Resources Monitoring Program

The Council feels strongly that the creation of a wildlife resources monitoring program, similar in format to the existing fisheries resource monitoring program, is necessary. This approach would allow the councils to provide input into the prioritization of wildlife monitoring projects of importance to their regions. The Council would also like to see sufficient funding in general for agency subsistence programs to ensure that agencies continue to implement ANILCA and that rural Alaskans can continue essential subsistence activities and practices.

Response

A wildlife resource monitoring program was one of the items mentioned in the Secretarial review as a possible addition to the Federal Subsistence Management Program. The Board supports the creation of a program similar to the existing fisheries monitoring program, however, without additional funding, establishing such a program is not likely at this time. Further, given current Federal Government's budget issues it is also not likely that budgets will increase.

The U.S. Forest Service (USFS) developed a Wildlife Resources Monitoring Program in 2006 which paralleled the Fisheries Resource Monitoring Program. In Southcentral, the USFS program was implemented on the Chugach National Forest. A couple of projects have been implemented under the program. Unfortunately, the formal program is on hold pending funding changes. Small wildlife monitoring projects are being funded for priority monitoring needs.

Issue 4: Predator Control

As the Council has pointed out in the past, moose, caribou, and sheep populations in Units 11, 12, 13, and 15 have been negatively affected by increased predation by wolves and bears. Active management of wolves and bears must be considered to promote healthy populations of moose, caribou, and sheep in order to increase subsistence harvest opportunities.

Response

The Board recognizes the Council's concerns regarding ungulate populations and future subsistence harvest opportunities. In response to the Council's request that active management of predators must be considered, the Board's policy is that predator control is a management decision to be made by the appropriate land management agency, within that agency's guidelines. Thus, the wildlife management activities on Federal public lands other than the subsistence take and use of fish and wildlife, such as predator control and habitat management, are not within the purview of the Board. However, the Board adopted a Predator Management Policy on May 20, 2004, and recognized the following points:

1. Predators are an important component of Alaska's dynamic ecosystems and are beneficial to maintaining balance, health, and diversity within associated wildlife populations and habitats.

2. There are traditional Alaska Native cultural beliefs and values associated with wolves, bears, and other predatory species.

3. Predators can impact ungulate populations that are valued by subsistence users.

4. Predator control may be an appropriate management tool on some Federal public lands for restoring prey populations to provide for subsistence needs where predation has reduced or held prey populations at levels significantly below historical levels of abundance.

Federal land management agencies are subject to different policy guidelines. In December 2006, the Secretary of the Interior responded to the Council regarding the process of implementing an intensive management program. The letter from the Secretary (copy enclosed) summarized the different legal requirements and policy guidelines regarding intensive management, including predator control, for the Bureau of Land Management, National Park Service, and U. S. Fish and Wildlife Service. In addition, the Alaska Regional Chief of the National Wildlife Refuge System responded to a letter from the Council requesting information on predator control on refuge lands in Alaska (copy enclosed). The Office of Subsistence Management, as directed by the Board,

will assist proponents with predator control proposals with procedures for submitting the proposals to the appropriate agency.

Issue 5: Bycatch

The Council is concerned about bycatch by commercial trawl fisheries operations and appreciates the work that is being done by the various agencies in monitoring and working on a solution to this issue. Decreasing bycatch is of critical importance to continued subsistence opportunities.

Response

At its June 2011 meeting, the North Pacific Fishery Management Council (NPFMC) took final action on management measures to limit Chinook salmon bycatch in the Western and Central Gulf of Alaska (GOA) pollock fisheries. Chinook salmon are currently a prohibited species in the pollock fishery, and their capture must be avoided. Prior to the meeting, the Federal Subsistence Board sent a letter to the NPFMC with a recommendation of a bycatch hard cap of 15,000 Chinook salmon.

The NPFMC adopted a prohibited species catch (PSC) limit of 25,000 Chinook salmon. The annual cap is apportioned by area:18,316 for the Central GOA pollock fisheries and 6,684 for the Western GOA, and will close the pollock fishery in each area once the PSC limit is reached. The NPFMC will also require vessels under 60 feet that are fishing for pollock to have observer coverage beginning no later than January 1, 2013. This primarily affects vessels in the Western GOA, where a large proportion of the fleet uses smaller boats. If the restructured observer program the NPFMC already approved is implemented beginning in 2013, observers will be deployed under that program, otherwise, vessels under 60 feet will need to comply with existing 30% observer coverage requirements until the restructured observer program comes online.

As part of its action, the NPFMC will also require full retention of all salmon species by all vessels fishing in the pollock trawl fisheries. The purpose of full retention is to provide an opportunity for collection of scientific data or biological samples. Currently, the National Marine Fisheries Service is only able to analyze samples from salmon that are caught as bycatch on observed Pollock trips. Full retention is a key prerequisite to estimating the representative composition, by stock of origin, of Chinook salmon caught as bycatch in the GOA Pollock fishery. Fish that are retained may not be kept for human consumption unless they are delivered to an authorized prohibited species donation program. At the June meeting, the Council heard testimony that all processors of GOA pollock (which, by regulation, must be delivered shoreside) have agreed to participate in SeaShare, an organization participating in the Food Bank of Alaska donation program. Details of the salmon donation program will be provided in the future.

Issue 6: Continued Access to Important Non-Game Subsistence Resources

The Council recognizes the critical role that non-fish or wildlife resources serve in supporting the subsistence way of life. The Council encourages Board support of efforts to ensure continued

access, with the least permitting requirements possible, to such resources as berries, firewood, house logs, and woody handicraft materials in general. The Council specifically endorses the Wrangell-St. Elias Subsistence Resource Commission's motion to include in that park's front country management planning authorization for the superintendent to designate areas that would be open to portable motor use without a permit, and clarification, in the context of the plan, that "gathering" dead or downed wood for firewood includes cutting.

Response

The Board derives its authority to manage the harvest of fish and wildlife for subsistence uses from a delegation by the Secretaries of the Interior and Agriculture. The delegation was limited in scope to the provision of a subsistence priority for the use of fish and wildlife taken from the Federal public lands under Title VIII of ANILCA. Because the Secretaries chose not to delegate authority over the management of other wild renewable resources to the Board, this authority remains with the individual agencies as part of their statutory management responsibilities.

Issue 7: Joint Pacific Alaska Range Complex Modernization and Enhancement

The Council is extremely concerned about the potential impacts of the Joint Pacific Alaska Range Complex (JPARC) Modernization and Enhancement proposals to subsistence users and subsistence resources in one of the most highly utilized areas of Alaska. The Council feels that the proposed low level flights pose threats to migratory birds and civilian aviation and cause disturbances to wildlife during hunting season and during vulnerable calving and winter periods.

Response

The U.S. Army and U.S. Air Force are in the process of writing an Environmental Impact Statement (EIS) that will analyze the potential environmental consequences associated with the JPARC proposal. The EIS is currently in the draft stages and it is anticipated that it will be published for public review this fall. Following publication, there will be a 45-day public comment period during which the public can make their concerns known to the military. We encourage all interested parties to visit the JPARC EIS website at http://www.jparceis.com/get_involved.aspx for more information on how to participate and for a detailed timeline of the EIS process.

Issue 8: Chisana Caribou Herd

The Eastern Interior Alaska Subsistence Regional Advisory Council requested that the Federal Subsistence Board approve a subcommittee consisting of members of the Eastern Interior Alaska and Southcentral Alaska Subsistence Regional Advisory Councils to address issues that contributed to Board deferral of wildlife proposal WP10-104. WP10-104 requested establishment of a harvest limit and season for the Chisana caribou herd in Game Management Unit 12, within the Eastern Interior Region, but adjacent to the Southcentral Region. Both Councils have an interest in this herd, but took different positions on WP10-104. The subcommittee was proposed to foster communication between the Councils and potentially come

to a mutually agreeable position that could be supported by the Board. This Council supports the creation of the subcommittee and would appreciate a response to the request.

Response

During its May 2010 meeting, the Federal Subsistence Board deferred Proposal WP10-104 because the Chisana Caribou Herd Management Plan had not been completed. The Board noted that it was premature to harvest caribou from the Chisana Herd until the management plan was in place to establish harvest guidelines. Because the proposal was postponed, the Board did not take action on establishing a subcommittee. During the 2012 wildlife cycle, two new wildlife proposals for harvest of Chisana Caribou were submitted. The two new proposals WP12-65 and 66, in addition to Proposal WP10-104, will be before the Board for its consideration during its January 2012 meeting. The analysis for Proposals WP10-104, WP12-65, and WP12-66 is a combined analysis and includes an ANILCA Section 804 analysis. If the Board moves forward on any of the three proposals, there would be an opportunity to establish the subcommittee for both communication between Councils and to provide input concerning the harvest allocation.

In closing, I thank the members of the Southcentral Alaska Subsistence Regional Advisory Council for their continued involvement and diligence in matters regarding the Federal Subsistence Management Program. I speak for the entire Board in expressing our appreciation for your efforts and our confidence that the subsistence users of the region are well represented through your work.

Sincerely,

Tim Towarak, Chair
Federal Subsistence Board

Enclosures

cc: Southcentral Alaska Subsistence
Regional Advisory Council Members
Federal Subsistence Board
Interagency Staff Committee
Council Coordination Division Chief, OSM

United States Department of the Interior
OFFICE OF THE SECRETARY
Washington, DC 20240

TAKE PRIDE IN AMERICA

DEC 19 2006

Mr. Gerald Nicholia, Chair
Eastern Interior Alaska Subsistence
Regional Advisory Council
101 12th Avenue, Room 110
Fairbanks, Alaska 99701

Dear Mr. Nicholia:

Thank you for your letter of September 22, 2006, to Secretary Dirk Kempthorne requesting that the process to implement an intensive management program with the State of Alaska, Department of Fish and Game on Federal public lands within the Eastern Interior Region of Alaska, be started immediately. I have been asked to respond to you directly.

I take the responsibility, as mandated in the Alaska National Interests Lands Conservation Act (ANILCA), of protecting the opportunity for continued subsistence uses in Alaska seriously; as well as that of conserving the nation's fish and wildlife and other natural resources on Alaska's Federal public lands, as directed by ANILCA and other Federal statutes. Each of the Department of the Interior (DOI) land management agencies within your region manage the resources entrusted to them according to these statutory mandates and the implementing regulations and policies. Consistent with these mandates, the DOI agencies will address your concerns.

I understand that staff from the Bureau of Land Management, National Park Service, and U.S. Fish and Wildlife Service (Service) gave presentations to your council at its October 2006 meeting in Delta Junction. They explained the legal requirements and policy guidelines each agency follows when considering requests for intensive management, including predator control. In addition, your council was provided written responses from the Refuge Managers of the Arctic, Yukon Flats, and Tetlin National Wildlife Refuges to your request to the Service Regional Director to initiate studies leading to control of predators of moose and caribou on these refuges.

Each DOI land management agency has differing legal requirements and policy guidelines regarding intensive management, including predator control, which are summarized below:

Bureau of Land Management (BLM)
The BLM manages its Alaska lands primarily under the Federal Land Policy and Management Act of 1976 and ANILCA. While the agency manages land uses and habitat on its lands. management of fish and wildlife on BLM lands is conducted by the State of Alaska. consistent with the traditional role of the State in managing resident species of fish and wildlife. Essentially. predator control activities by the State of Alaska may take place on BLM lands. as long as they do not conflict with on-going or anticipated BLM authorized actions. The BLM views predator control as a State function and the agency neither supports nor condemns the predator control methods approved by the Alaska Board of Game.

U.S. Fish and Wildlife Service (Service)
The Service manages the national wildlife refuges in Alaska under the mandates of ANILCA and the Refuge Administration Act. There is nothing in ANILCA. or other applicable federal laws. regulations and policies, nor in the refuge comprehensive conservation plans, which specifically precludes predator control on national wildlife refuges in Alaska. However, these laws, regulations and policies do require comprehensive analyses prior to considering a predator control program to ensure that the action is both appropriate and biologically justified. The following are some of the general prerequisites for considering predator control on Alaska refuges.

Foremost. management actions must be biologically justified and used in a prudent and ecologically sound manner to conform to the agency's Policy on Maintaining the Biological Integrity, Diversity. and Environmental Health of the National Wildlife Refuge System (System). This policy requires that the agency 1) *identify the refuge purpose(s), legislative responsibilities, refuge role within the ecosystem, and System mission;* 2) *assess the current status of biological integrity, diversity, and environmental health through baseline... surveys and studies...;* 3) *assess historic conditions and compare them to the current condition ... This will provide a benchmark... for the relative intactness of ecosystem functions and processes; and* 4) *consider the refuge's importance to refuge, ecosystem, national and international landscape scales of biological integrity, diversity, and environmental health....* A thorough evaluation must be given to substantiate intended benefits of the control efforts, and alternatives to direct control must be evaluated, attempted, and exhausted as a practical means of achieving management objectives.

Because predator control of wolves and/or bears on national wildlife refuges is highly controversial, it would be considered a major Federal action subject to National Environmental Policy Act (NEPA) requirements which would include preparation of an environmental impact statement (EIS) or, at a minimum, an environmental assessment

(EA). As part of an EIS or EA, the Service would evaluate predator control in the context of the purposes of the refuge and in consideration of the biological integrity policy. Additionally, the agency would evaluate the effects of the proposed predator control on subsistence uses and needs, as required by Section 810 of ANILCA. Section 810 requirements would be incorporated into the NEPA process and documents.

In addition, if predator control is proposed to be carried out on a refuge by an agency or others not acting as agents of the Service, the refuge manager must find the proposed control program to be consistent with the Service compatibility regulations implementing the Refuge Administration Act. These regulations require that permitted uses of the refuge be compatible with the purposes of the refuge, the mission of the national wildlife refuge system, and the resource management objectives identified in the refuge comprehensive conservation plans.

Be assured that the Service is giving serious consideration to the concerns you have raised relating to the effects of predation on subsistence uses. By copy of this letter I am requesting that the Service's staff in Alaska to explore available options to conduct the studies necessary to fully evaluate the need for and potential benefits of predator reductions to refuge resources and subsistence users, as well as alternatives to direct agency-conducted reduction of predators. In this evaluation, the Service will closely coordinate and, where possible, cooperate with the State of Alaska in its efforts to provide sustainable, harvestable surpluses for subsistence use.

National Park Service (NPS)

The NPS lands in Alaska are managed according to ANILCA and the underlying 1916 Organic Act, which established and continues to guide NPS management. The ANILCA, per sections 802(1), 808(6) and 815(1)(3), established a standard of "conservation of healthy populations" for wildlife management in Alaska's parks, monuments, and preserves. The legislative history to ANILCA clearly expresses congressional intent in regards to intensive management, including predator control. On page 171 of Senate Report 96-413, November 1979, it states:

In authorizing subsistence uses within National Parks, Monuments, Preserves, and National recreation Areas, it is the intent of the Committee that certain traditional National Park Service management values be maintained. It is contrary to the National Park Service concept to manipulate habitat or populations to achieve maximum utility of natural resources. Rather, the National Park System concept requires implementation of management policies which strive to maintain the natural abundance, behavior, diversity, and ecological integrity of native animals as part of their ecosystem, and the Committee intends that that concept be maintained... Accordingly, the Committee does not expect the National Park Service to engage in habitat manipulation or control of other species for the purpose of maintaining subsistence uses within the National Park System units.

The same report goes on to state (pages 232-233):

The Committee recognizes that the management policies and legal authorities of the National Park System and the National Wildlife Refuge System may require different interpretations and application of the "healthy population" concept consistent with management objectives of each system. Accordingly, the Committee recognizes that the policies and legal authorities of the managing agencies will determine the nature and degree of management program affecting ecological relationships, population dynamics, and manipulations of the components of the ecosystem.

As you can see, the Congress understood and expected that the policies of the NPS were to play a significant role in interpreting how the mandate for "conservation of healthy populations" is carried out.

One of the first major actions the Secretary completed was a long and thorough review of draft NPS management policies. On August 31, 2006, the Secretary was satisfied that the policies were appropriate and struck the correct balance for NPS guidance. Those policies contain several sections (in Chapter 4) that relate to your request. In all, those sections direct the NPS to, in a manner consistent with ANILCA and its Senate history, maintain the natural population fluctuations and processes that influence the dynamics of individual plant and animal populations within their ecosystems. Section 4.4.3, *Harvest of Plants and Animals by the Public*, directly deals with the issues you have raised. Among other things, that section states: *The (National Park) Service does not engage in activities to reduce the number of native species for the purpose of increasing the number of harvest species (i.e. predator control), nor does the (National Park) Service permit others to do so on land managed by the National Park Service.*

To summarize, undertaking intensive management practices, including predator control activities as conducted by the State of Alaska, is not allowed on NPS lands.

I hope this brief summary of the DOI agencies' legal frameworks for considering predator control on their respective lands is helpful to your council's understanding of the constraints they must conform to in addressing your concerns. I would encourage your council to continue to work closely with the Federal agencies and the State in developing management options to ameliorate, to the extent possible, the adverse effects of predation on wildlife resources utilized by subsistence users. In addition to seeking predator reduction programs on Federal lands which are consistent with the legal and policy mandates of the land managing agencies, opportunities for predator management on lands under State jurisdiction should be explored, as appropriate. Additionally, the council may be able to encourage increased harvests of predators by local residents under current State hunting and trapping regulations where applicable.

In closing, I support and applaud your efforts to ensure that subsistence uses and way of life in Alaska are protected. I appreciate your council's continuing contribution to the Federal Subsistence Program and your diligence in representing the interests of subsistence users in your region. If you have any further questions, please feel free to contact me at (202) 208-5347.

Sincerely,

Acting Assistant Secretary for Fish and Wildlife and Parks

United States Department of the Interior

FISH AND WILDLIFE SERVICE
1011 E. Tudor Road
Anchorage, Alaska 99503-6199

IN REPLY REFER TO
NWRS710-127

JUL 07 2010

Susan Entsminger
Chair, Eastern Interior Alaska Subsistence Regional Advisory Council
c/o U.S. Fish & Wildlife Service
1011 E. Tudor Road
Anchorage, Alaska 99503

Dear Ms. Entsminger:

You wrote Federal Subsistence Board Chair Michael Fleagle on February 26, 2010, asking for support and guidance on a variety of issues. The first issue outlined in your letter was "Intensive Wildlife Management" relative to Service management of lands in Alaska. I was asked to respond to this issue.

The State of Alaska and the U.S. Fish and Wildlife Service have different mandates related to providing hunting opportunity on lands under their respective jurisdictions. Under the State's intensive management law, the Board of Game may identify areas where consumptive use of big game is a preferred use and implement intensive management actions to achieve high levels of human harvest. On Alaska's National Wildlife Refuges, on the other hand, we are obligated under the Alaska National Interest Lands Conservation Act to manage fish, wildlife, and habitats for natural diversity. Our obligations to provide continued subsistence opportunity must be consistent with natural diversity. If these mandates conflict, we must find balance between managing for natural diversity and providing subsistence opportunity. We are legally precluded from managing with a singular focus on human harvest as defined by the State's intensive management law.

With subsistence as a legal purpose of all Alaska Refuges except Kenai, we are concerned when refuge lands do not meaningfully provide for subsistence uses of rural residents. A scarcity of fish or game may be due to wildlife population declines from previous levels due to habitat changes, over harvest, disease, weather events, or natural predator/prey cycles. Alternatively, sometimes wildlife populations like caribou redistribute onto lands less accessible to established communities. When fuel costs are high, traditional hunting areas can become inaccessible for economic reasons. Subsistence uses may also increase over time when village populations expand. Our responsibility to manage Alaska Refuge lands for fish, wildlife, and habitats in their natural diversity, while also providing continued subsistence opportunity consistent with natural diversity, is complex.

When subsistence resources become scarce, we have a variety of actions we can take, often without exhaustive study. We can restrict or curtail non-subsistence use. If needed, restrictions on

TAKE PRIDE IN AMERICA

subsistence harvest may follow to allow game populations to stabilize and recover. We can increase law enforcement to reduce illegal take of fish and wildlife. We can work with local communities to protect critical components of a wildlife population such as pregnant females or birds late in the nesting season. We can propose and/or support expanded predator hunting and trapping seasons. Lastly, we may be able to offer trapping clinics in rural communities to encourage the return of predator trapping levels that supported higher game populations in the past. Actions such as these have been taken around the state, and will continue to be important tools to help us fulfill our subsistence responsibilities on Refuges.

Actions beyond the above, such as active predator control programs, require considerable additional review. First, we need to assess the complex interplay between predators (including humans), prey populations, and habitat conditions. We must answer questions such as "Do current conditions represent a natural part of an ecological cycle, or has natural diversity somehow been compromised?" and "How does human harvest affect the prey population? Have levels of harvest, and their effects on the prey population, changed over time?"

If we find that a natural cycle is at play, but game populations are so low as to preclude subsistence harvest, we need to evaluate the efficacy and potential consequences of disrupting the natural system to provide for subsistence uses. These topics and alternative actions we could take, need to be evaluated following guidance from the National Environmental Policy Act. To comply with the National Environmental Policy Act, we prepare an environmental assessment or environmental impact statement with opportunity for public involvement. Such assessments are both time consuming and costly, but are essential to thoroughly analyze complex issues and comply with law. As you know, predator control is an extremely volatile issue and any proposed action would be subject to intense public scrutiny and potential litigation.

You asked in your letter if any evaluation of predator control to enhance subsistence on Alaska refuges has been completed. Yes. We have had several requests to allow or conduct predator management on refuges in recent years. In each of these cases we concluded such actions were not justified based on existing biological data. Most recently, however, the State has proposed wolf control actions on Unimak Island, part of Alaska Maritime National Wildlife Refuge, to enhance caribou numbers. Due to declining population levels, hunting of this herd was curtailed in 2009. In this case we have begun detailed analysis of the issue. Working with the State, we are currently drafting a Unimak Island caribou management plan, which will identify both caribou and predator parameters that would need to be achieved to reopen subsistence hunting of Unimak caribou. Once the plan is complete, we will draft an environmental assessment to evaluate alternatives to achieve the proposed condition and actions. We will then decide if additional management actions are appropriate, and if so, develop a plan to implement them. We expect to complete this decision making process in early 2011.

Finally, you asked for copies of the Service's legal requirements and policy guidelines that we use when considering requests for predator management. I have enclosed a page with the web site addresses for the applicable statutes and policies.

Thanks for the opportunity to explain the role of intensive management on Alaska National Wildlife Refuges and procedures needed to consider predator control.

Sincerely,

Regional Chief,
National Wildlife Refuge System-Region 7

Attachment

Statutes, Regulations, and policies guiding management of the National Wildlife Refuge System – Alaska in considering predator management.

Alaska National Interest Lands Conservation Act *(16 U.S.C. 1602-1784)*
(http://~~www.r7~~ alaska.fws.gov/asm/anilca/toc.html)

National Wildlife Refuge System Administration Act, of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997. *(16 U.S. C. 668dd-ee)*
http://epw.senate.gov/nwrsa.pdf

The Biological Integrity, Diversity, and Environmental Health Policy
http://www.fws.gov/policy/601fw3.html

National Environmental Policy Act of 1969 (NEPA)(42 U.S.C. 4321-4347) and the Council of Environmental Quality' (CEQ) Regulations for Implementing the procedural Provisions of NEPA, 40 CFR 1500-1508
U.S. EPA (http://es.epa.gov/oeca/ofa/nepa.html)
http://ceq.hss.doe.gov/nepa/regs/ceq/toc_ceq.htm

United States Department of the Interior

OFFICE OF THE SECRETARY
1689 C Street, Suite 100
Anchorage, Alaska 99501-5151

September 12, 2011

Secretary Seeks Two Public Members to Join the Federal Subsistence Board

On October 23, 2009, the Secretary of the Interior announced the initiation of a Departmental review of the Federal Subsistence Management Program in Alaska. The review focused on how the program is meeting the purposes and subsistence provisions of Title VIII of the Alaska National Interest Lands Conservation Act of 1980 (ANILCA), and how the program is serving rural subsistence users. From the review several administrative and regulatory changes were proposed to strengthen the program and make it more responsive to rural subsistence users.

One proposed regulatory change has recently been finalized that would expand the Federal Subsistence Board by adding two public members appointed by the Secretary of the Interior with the concurrence of the Secretary of Agriculture. This action will afford additional stakeholder input to the Federal Subsistence Board process. The Federal Subsistence Board was created in the early 1990s and is the decision-making body that oversees the management of fish and wildlife resources for subsistence uses on Federal public lands and waters in Alaska. It is currently composed of the Alaska directors of the National Park Service, the U.S. Fish and Wildlife Service, the Bureau of Land Management, the Bureau of Indian Affairs, the U.S. Forest Service, and a Chair appointed by the Secretary of the Interior with the concurrence of the Secretary of Agriculture.

Nominations and applications for the two public member positions on the Federal Subsistence Board are now being solicited and welcomed through October 31, 2011.

The public members of the Board are private citizens who are paid on a part-time, per-hour basis for conducting the official business of the Board. The Board typically meets 4-5 times yearly for 1-3 days. The Secretary is seeking public members who have:

- "Personal knowledge of and direct experience with subsistence uses in rural Alaska" (from the Code of Federal Regulations: 50 CFR 100.10 {76FR56109});
- Experience with and knowledge of the federal subsistence management program;
- A commitment to the purposes and goals of the subsistence provisions (Title VIII) of the Alaska National Interest Lands Conservation Act (ANILCA);
- An ability to listen to and understand competing views;
- An ability to make fair and objective decisions on complex biological and allocative issues.

Please submit nominations or applications via mail, fax or email to the addresses below by October 31, 2011. For questions, please call 907-271-5485 or write the Office of the Secretary in Anchorage.

Background information on the federal subsistence program, the Federal Subsistence Board, the Secretary's subsistence review and other agency information is available on the subsistence review website: http://www.doi.gov/whatwedo/subsistencereview/index.cfm or the Office of Subsistence Management's website: http://alaska.fws.gov/asm/index.cfml .

via mail:
Department of the Interior
Office of the Secretary
1689 C Street, Suite 100
Anchorage, AK 99501

via email:
subsistence@ios.doi.gov

via fax:
907-271-4102

representatives to conduct business with us electronically at the times and in the manner we prescribe on matters for which the representatives request direct fee payment. However, we are not yet requiring them to use the electronic versions of specific OMB-approved collections. We will adjust the burden for affected OMB-approved collections before requiring representatives to use the collections' electronic versions.

(Catalog of Federal Domestic Assistance Program Nos. 96.001, Social Security-Disability Insurance; 96.002, Social Security-Retirement Insurance; 96.004, Social Security-Survivors Insurance; and 96.006, Supplemental Security Income)

List of Subjects

20 CFR Part 404

Administrative practice and procedure, Blind, Disability benefits, Old-Age, Survivors, and Disability Insurance, Penalties, Reporting and recordkeeping requirements, Social Security.

20 CFR Part 416

Administrative practice and procedure, Penalties, Reporting and recordkeeping requirements, Supplemental Security Income (SSI).

Michael J. Astrue,

Commissioner of Social Security.

For the reasons set out in the preamble, we are amending 20 CFR part 404 subpart R and part 416 subpart O as set forth below:

PART 404—FEDERAL OLD-AGE, SURVIVORS AND DISABILITY INSURANCE (1950–)

Subpart R—[Amended]

■ 1. The authority citation for subpart R of part 404 is revised to read as follows:

Authority: Secs. 205(a), 206, 702(a)(5), and 1127 of the Social Security Act (42 U.S.C. 405(a), 406, 902(a)(5), and 1320a–6).

■ 2. Add § 404.1713 to read as follows:

§ 404.1713 Mandatory use of electronic services.

A representative must conduct business with us electronically at the times and in the manner we prescribe on matters for which the representative requests direct fee payment. (*See* § 404.1740(b)(4)).

■ 3. Amend § 404.1740 by revising the second sentence of paragraph (b)(2)(vi) and the second sentence of paragraph (b)(3)(ii), and adding paragraph (b)(4), to read as follows:

§ 404.1740 Rules of conduct and standards of responsibility for representatives.

* * * * *

(b) * * *

(2) * * *

(vi) * * * In §§ 404.1560 through 404.1569, we discuss in more detail the evidence we need when we consider vocational factors;

(3) * * *

(ii) * * * This includes providing prompt and responsive answers to our requests for information pertinent to processing of the claim; and

(4) Conduct business with us electronically at the times and in the manner we prescribe on matters for which the representative requests direct fee payment. (*See* § 404.1713).

* * * * *

PART 416—SUPPLEMENTAL SECURITY INCOME FOR THE AGED, BLIND, AND DISABLED

Subpart O—[Amended]

■ 4. The authority citation for subpart O of part 416 is revised to read as follows:

Authority: Secs. 702(a)(5), 1127, and 1631(d) of the Social Security Act (42 U.S.C. 902(a)(5), 1320a–6, and 1383(d)).

■ 5. Add § 416.1513 to read as follows:

§ 416.1513 Mandatory use of electronic services.

A representative must conduct business with us electronically at the times and in the manner we prescribe on matters for which the representative requests direct fee payment. (*See* § 416.1540(b)(4)).

■ 6. Amend § 416.1540 by revising the second sentence of paragraph (b)(2)(vi) and the second sentence of paragraph (b)(3)(ii), and adding paragraph (b)(4), to read as follows:

§ 416.1540 Rules of conduct and standards of responsibility for representatives.

* * * * *

(b) * * *

(2) * * *

(vi) * * * In §§ 416.960 through 416.969, we discuss in more detail the evidence we need when we consider vocational factors;

(3) * * *

(ii) * * * This includes providing prompt and responsive answers to our requests for information pertinent to processing of the claim; and

(4) Conduct business with us electronically at the times and in the manner we prescribe on matters for which the representative requests direct fee payment. (*See* § 416.1513).

* * * * *

[FR Doc. 2011–23232 Filed 9–9–11; 8:45 am]

BILLING CODE 4191–02–P

DEPARTMENT OF AGRICULTURE

Forest Service

36 CFR Part 242

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 100

[Docket No. FWS–R7–SM–2011–0004; 70101–1261–0000L6]

RIN 1018–AX52

Subsistence Management Regulations for Public Lands in Alaska—Subpart B, Federal Subsistence Board

AGENCIES: Forest Service, Agriculture; Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: This final rule revises the regulations concerning the composition of the Federal Subsistence Board (Board). On October 23, 2009, the Secretary of the Interior announced the initiation of a Departmental review of the Federal Subsistence Management Program in Alaska. The review focused on how the program is meeting the purposes and subsistence provisions of Title VIII of the Alaska National Interest Lands Conservation Act of 1980 (ANILCA), and how the program is serving rural subsistence users. The review proposed several administrative and regulatory changes to strengthen the program and make it more responsive to rural subsistence users. This rule expands the Federal Subsistence Board by two public members who possess personal knowledge of and direct experience with subsistence uses in rural Alaska. This action will afford additional stakeholder input to the process.

DATES: This rule is effective October 12, 2011.

ADDRESSES: The Board meeting transcripts are available for review at the Office of Subsistence Management, 1011 East Tudor Road, Mail Stop 121, Anchorage, Alaska 99503, on *http://www.regulations.gov* at Docket No. FWS–R7–SM–2011–0004, or on the Office of Subsistence Management Web site (*http://alaska.fws.gov/asm/index.cfml*).

FOR FURTHER INFORMATION CONTACT: Chair, Federal Subsistence Board, c/o U.S. Fish and Wildlife Service, Attention: Dr. Polly Wheeler, Office of Subsistence Management; (907) 786–3888 or *subsistence@fws.gov*. For questions specific to National Forest System lands, contact Steve Kessler, Subsistence Program Leader, USDA, Forest Service, Alaska Region, (907) 743–9461 or *skessler@fs.fed.us*.

SUPPLEMENTARY INFORMATION:

Background

Under Title VIII of the Alaska National Interest Lands Conservation Act (ANILCA) (16 U.S.C. 3111–3126), the Secretary of the Interior and the Secretary of Agriculture (Secretaries) jointly implement the Federal Subsistence Management Program. This program provides a preference for take of fish and wildlife resources for subsistence uses on Federal public lands and waters in Alaska. The Secretaries published temporary regulations to carry out this program in the **Federal Register** on June 29, 1990 (55 FR 27114), and final regulations were published in the **Federal Register** on May 29, 1992 (57 FR 22940). The Program has subsequently amended these regulations a number of times. Because this program is a joint effort between Interior and Agriculture, these regulations are located in two titles of the Code of Federal Regulations (CFR): Title 36, "Parks, Forests, and Public Property," and Title 50, "Wildlife and Fisheries," at 36 CFR 242.1–28 and 50 CFR 100.1–28, respectively. The regulations contain subparts as follows: Subpart A, General Provisions; Subpart B, Program Structure; Subpart C, Board Determinations; and Subpart D, Subsistence Taking of Fish and Wildlife.

Consistent with subpart B of these regulations, the Secretaries established a Federal Subsistence Board to administer the Federal Subsistence Management Program. The Board is currently made up of:

- A Chair appointed by the Secretary of the Interior with concurrence of the Secretary of Agriculture;
- The Alaska Regional Director, U.S. Fish and Wildlife Service;
- The Alaska Regional Director, U.S. National Park Service;
- The Alaska State Director, U.S. Bureau of Land Management;
- The Alaska Regional Director, U.S. Bureau of Indian Affairs; and
- The Alaska Regional Forester, U.S. Forest Service.

Through the Board, these agencies participate in the development of regulations for subparts C and D, which, among other things, set forth program eligibility and specific harvest seasons and limits.

In administering the program, the Secretaries divided Alaska into 10 subsistence resource regions, each of which is represented by a Subsistence Regional Advisory Council (Council). The Councils provide a forum for rural residents with personal knowledge of local conditions and resource requirements to have a meaningful role in the subsistence management of fish and wildlife on Federal public lands in Alaska. The Council members represent varied geographical, cultural, and user interests within each region.

Current Rule

On October 23, 2009, Secretary of the Interior Salazar announced the initiation of a Departmental review of the Federal Subsistence Management Program in Alaska. The review focused on how the Program is meeting the purposes and subsistence provisions of Title VIII of the Alaska National Interest Lands Conservation Act of 1980 (ANILCA), and how the Program is serving rural subsistence users as envisioned when the program began in the early 1990s.

On August 31, 2010, the Secretaries announced the findings of the review, which included several proposed administrative and regulatory changes to strengthen the Program and make it more responsive to those who rely on it for their subsistence uses. One proposal called for adding two public members representing rural Alaskan subsistence users to the Federal Subsistence Board, which would allow additional regional representation and increased stakeholder input in the decisionmaking process.

The Departments published a proposed rule on February 11, 2011 (76 FR 7758), to amend the regulations in subpart B of 36 CFR part 242 and 50 CFR part 100, "Federal Subsistence Board." The proposed rule opened a comment period, which closed on April 12, 2011. The Departments advertised the proposed rule by mail, radio, and newspaper. During the meeting period for the Federal Subsistence Regional Advisory Councils as published in the proposed rule, the Councils met and, in addition to other Council business, formulated recommendations to the Board on the proposed rule and received comments and suggestions from the public and Alaska Native organizations. The Board met on May 3, 2011, to receive additional comments and to discuss recommendations to the Secretaries on the proposed rule. The Board received a total of 6 comments from the public, 7 from Alaska Native organizations, 2 from subsistence resource commissions, 3 from State advisory committees, and 10 from Federal Subsistence Regional Advisory Councils. All comments were posted at *http://www.regulations.gov* at Docket No. FWS–R7–SM–2011–0004.

The Councils had a substantial role in reviewing the proposed rule and making recommendations for the final rule. Moreover, a Council Chair, or a designated representative, presented each Council's recommendations at the Board meeting of May 3, 2011. These final regulations reflect Board review and consideration of Council recommendations and public and Alaska Native organizations' comments. The public received extensive opportunity to review and comment on all proposed changes. Conforming regulatory changes are also made to clarify the designation of alternates for Board members representing Federal agencies and to increase the size of a quorum.

Summary of Comments and Board Recommendation to the Secretaries

The Board received a total of 28 public comments. All but two supported the addition of two members to the Board. One comment was neutral, and another opposed the proposed rule. Both of these comments recommended that the Board membership be changed to be comprised solely of members of the public or Alaska Natives with no Federal agency representation.

All 10 Federal Subsistence Regional Advisory Councils supported the proposed rule. While the majority of comments supported the proposed rule, a majority also recommended that the proposed language be changed from "* * * two public members representing rural Alaskan subsistence users * * *" to "* * * two public members who are rural Alaskan subsistence users * * *".

After careful review of all public, Tribal, and Native Corporation comments and consideration of the Councils' recommendations, the Board recommended the above language to the Secretaries. The Board's justification for this recommended modification to the language in the proposed rule was:

- To truly represent subsistence users, public members need to be actively participating in the subsistence way of life;
- With the exception of the Chair, active subsistence users are not represented on this Board, but their knowledge and current hunting, fishing, and gathering experience would clearly benefit this Board; and

• This recommendation would demonstrate a genuine commitment to listening to what the Board heard through the public comment process on the proposed rule.

In addition to recommendations and comments on the proposed regulatory language, the Councils' and public comments recommended several selection criteria for new public Board members. While these criteria was not addressed in the proposed rule, the Board consolidated these recommendations and forwarded them to the Secretaries.

On July 25, 2011, Secretary of the Interior Salazar, with concurrence of Secretary of Agriculture Vilsack, notified the Federal Subsistence Board that they approved the addition of two public members to the Board with the following language, "* * * two public members who possess personal knowledge of and direct experience with subsistence uses in rural Alaska * * *". The approved language, while differing slightly from the Board's recommendation, captures the intent of the Board and recommendations made by the Councils, and the majority of comments from Alaska Native organizations and members of the public. The Secretaries responded positively to the recommended selection criteria for public members to the Board.

Tribal Consultation and Comment

As expressed in Executive Order 13175, "Consultation and Coordination with Indian Tribal Governments," the Federal officials that have been delegated authority by the Secretaries are committed to honoring the unique government-to-government political relationship that exists between the Federal Government and Federally Recognized Indian Tribes (Tribes) as listed in 75 FR 60810 (October 1, 2010) and the relationship required by statute for consultation and coordination with Alaska Native corporations. Consultation with Alaska Native corporations is based on Public Law 108–199, div. H, Sec. 161, Jan. 23, 2004, 118 Stat. 452, as amended by Public Law 108–447, div. H, title V, Sec. 518, Dec. 8, 2004, 118 Stat. 3267, which provides that: "The Director of the Office of Management and Budget and all Federal agencies shall hereafter consult with Alaska Native corporations on the same basis as Indian Tribes under Executive Order No. 13175."

Title VIII of the Alaska National Interest Lands Conservation Act does not provide rights to Tribes for the subsistence taking of wildlife, fish, and shellfish. However, because Tribal members are affected by subsistence regulations, the Secretaries, through the Board, have provided Federally recognized Tribes and Alaska Native corporations an opportunity to consult on this rule.

The Board engaged in outreach efforts for this rule, including a notification letter, to ensure that Tribes and Alaska Native corporations were advised of the mechanisms by which they could participate. The Board provided a variety of opportunities for consultation: Commenting on proposed changes to the existing rule; engaging in dialogue at the Regional Council meetings; engaging in dialogue at the Board's meetings; and providing input in person, by mail, e-mail, or phone at any time during the rulemaking process. The Board is committed to efficiently and adequately providing opportunities to Tribes and Alaska Native corporations for consultation with regard to subsistence rulemaking.

The Board considered Tribes' and Alaska Native corporations' information, input, and recommendations, and addressed their concerns as much as practicable. A total of seven Alaska Native organizations provided comments and recommendations on this rule.

Conformance With Statutory and Regulatory Authorities

Administrative Procedure Act Compliance

The Board has provided extensive opportunity for public input and involvement in compliance with Administrative Procedure Act requirements, including publishing a proposed rule in the **Federal Register**, and receiving public comment on the proposed regulatory change through *http://www.regulations.gov*. There were also opportunities for participation during multiple Regional Council meetings at which Council recommendations were made in consideration of public comments received and opportunity for additional public comment during the Board meeting prior to deliberation and forming a recommendation to the Secretaries. Therefore, the Board believes that sufficient public notice and opportunity for involvement have been given to affected persons regarding the Board's recommendation and the Secretaries' decision.

National Environmental Policy Act Compliance

A Draft Environmental Impact Statement that described four alternatives for developing a Federal Subsistence Management Program was distributed for public comment on October 7, 1991. The Final Environmental Impact Statement (FEIS) was published on February 28, 1992. Based on the public comments received, the analysis contained in the FEIS, and the recommendations of the Federal Subsistence Board and the Department of the Interior's Subsistence Policy Group, the Secretary of the Interior, with the concurrence of the Secretary of Agriculture, through the U.S. Department of Agriculture–Forest Service, selected Alternative IV as identified in the DEIS and FEIS. The Record of Decision (ROD) on Subsistence Management for Federal Public Lands in Alaska was signed April 6, 1992. The selected alternative in the FEIS (Alternative IV) defined the administrative framework of an annual regulatory cycle for subsistence regulations. Several alternatives were considered for the composition of the Board including all Federal agency heads and all public members representing subsistence users. This regulation adding two additional public members to the Board falls within the scope of alternatives. For this reason, the impacts described in the FEIS and ROD are deemed sufficient for this regulation and require no further analysis.

Even in the absence of the consideration of alternatives in the existing programmatic FEIS and ROD, no further NEPA analysis would be required in this instance. There are two reasons for this. The first is that this action is merely administrative in nature and has no environmental impact. The second is that activities of this nature are categorically excluded from the requirements of NEPA under both Department of the Interior (DOI) regulations and Department of Agriculture (USDA) regulations. Specifically, DOI regulations at 43 CFR 46.210 set forth categorical exclusions for both internal organizational changes and the adoption of regulations that are of an administrative nature. Similarly, USDA regulations at 7 CFR 1b.3(a) provide a categorical exclusion for routine activities such as personnel and organizational changes, and similar administrative functions.

The final rule for subsistence management regulations for public lands in Alaska, subparts A, B, and C, implemented the Federal Subsistence Management Program and included a framework for a regulatory cycle for the subsistence taking of wildlife and fish. The following **Federal Register** documents pertain to this rulemaking:

SUBSISTENCE MANAGEMENT REGULATIONS FOR PUBLIC LANDS IN ALASKA, SUBPARTS A, B, AND C: FEDERAL REGISTER DOCUMENTS PERTAINING TO THE FINAL RULE

Federal Register citation	Date of publication	Category	Details
57 FR 22940	May 29, 1992	Final Rule	"Subsistence Management Regulations for Public Lands in Alaska; Final Rule" was published in the **Federal Register**.
64 FR 1276	January 8, 1999	Final Rule	Amended the regulations to include subsistence activities occurring on inland navigable waters in which the United States has a reserved water right and to identify specific Federal land units where reserved water rights exist. Extended the Federal Subsistence Board's management to all Federal lands selected under the Alaska Native Claims Settlement Act and the Alaska Statehood Act and situated within the boundaries of a Conservation System Unit, National Recreation Area, National Conservation Area, or any new national forest or forest addition, until conveyed to the State of Alaska or to an Alaska Native Corporation. Specified and clarified the Secretaries' authority to determine when hunting, fishing, or trapping activities taking place in Alaska off the public lands interfere with the subsistence priority.
66 FR 31533	June 12, 2001	Interim Rule	Expanded the authority that the Board may delegate to agency field officials and clarified the procedures for enacting emergency or temporary restrictions, closures, or openings.
67 FR 30559	May 7, 2002	Final Rule	Amended the operating regulations in response to comments on the June 12, 2001, interim rule. Also corrected some inadvertent errors and oversights of previous rules.
68 FR 7703	February 18, 2003	Direct Final Rule	Clarified how old a person must be to receive certain subsistence use permits and removed the requirement that Regional Councils must have an odd number of members.
68 FR 23035	April 30, 2003	Affirmation of Direct Final Rule.	Because no adverse comments were received on the direct final rule (67 FR 30559), the direct final rule was adopted.
69 FR 60957	October 14, 2004	Final Rule	Clarified the membership qualifications for Regional Advisory Council membership and relocated the definition of "regulatory year" from subpart A to subpart D of the regulations.
70 FR 76400	December 27, 2005	Final Rule	Revised jurisdiction in marine waters and clarified jurisdiction relative to military lands.
71 FR 49997	August 24, 2006	Final Rule	Revised the jurisdiction of the subsistence program by adding submerged lands and waters in the area of Makhnati Island, near Sitka, AK. This allowed subsistence users to harvest marine resources in this area under seasons, harvest limits, and methods specified in the regulations.
72 FR 25688	May 7, 2007	Final Rule	Revised nonrural determinations.
75 FR 63088	October 14, 2010	Final Rule	Amended the regulations for accepting and addressing special action requests and the role of the Regional Advisory Councils in the process.

An environmental assessment was prepared in 1997 on the expansion of Federal jurisdiction over fisheries and is available from the office listed under **FOR FURTHER INFORMATION CONTACT**. The Secretary of the Interior with the concurrence of the Secretary of Agriculture determined that the expansion of Federal jurisdiction did not constitute a major Federal action significantly affecting the human environment and, therefore, signed a Finding of No Significant Impact.

Section 810 of ANILCA

An ANILCA § 810 analysis was completed as part of the FEIS process on the Federal Subsistence Management Program. The intent of all Federal subsistence regulations is to accord subsistence uses of fish and wildlife on public lands a priority over the taking of fish and wildlife on such lands for other purposes, unless restriction is necessary to conserve healthy fish and wildlife populations. The final § 810 analysis determination appeared in the April 6, 1992, ROD and concluded that the Program, under Alternative IV with an annual process for setting subsistence regulations, may have some local impacts on subsistence uses, but will not likely restrict subsistence uses significantly. During the subsequent environmental assessment process for extending fisheries jurisdiction, an evaluation of the effects of this rule was conducted in accordance with § 810. That evaluation also supported the Secretaries' determination that the rule

will not reach the "may significantly restrict" threshold that would require notice and hearings under ANILCA § 810(a).

Paperwork Reduction Act

An agency may not conduct or sponsor and you are not required to respond to a collection of information unless it displays a currently valid Office of Management and Budget (OMB) control number. This rule does not contain any new collections of information that require OMB approval. OMB has reviewed and approved the following collections of information associated with the subsistence regulations at 36 CFR part 242 and 50 CFR part 100: Subsistence hunting and fishing applications, permits, and reports, Federal Subsistence Regional Advisory Council Membership Application/Nomination and Interview Forms (OMB Control No. 1018–0075 expires January 31, 2013).

Regulatory Planning and Review (Executive Order 12866)

The Office of Management and Budget (OMB) has determined that this rule is not significant and has not reviewed this rule under Executive Order 12866. OMB bases its determination upon the following four criteria:

(a) Whether the rule will have an annual effect of $100 million or more on the economy or adversely affect an economic sector, productivity, jobs, the environment, or other units of the government.

(b) Whether the rule will create inconsistencies with other agencies' actions.

(c) Whether the rule will materially affect entitlements, grants, user fees, loan programs, or the rights and obligations of their recipients.

(d) Whether the rule raises novel legal or policy issues.

Regulatory Flexibility Act

The Regulatory Flexibility Act of 1980 (5 U.S.C. 601 *et seq.*) requires preparation of flexibility analyses for rules that will have a significant effect on a substantial number of small entities, which include small businesses, organizations, or governmental jurisdictions. In general, the resources to be harvested under this rule are already being harvested and consumed by the local harvester and do not result in an additional dollar benefit to the economy. However, we estimate that two million pounds of meat are harvested by subsistence users annually and, if given an estimated dollar value of $3.00 per pound, this amount would equate to about $6 million in food value statewide. Based upon the amounts and values cited above, the Departments certify that this rulemaking will not have a significant economic effect on a substantial number of small entities within the meaning of the Regulatory Flexibility Act.

Small Business Regulatory Enforcement Fairness Act

Under the Small Business Regulatory Enforcement Fairness Act (5 U.S.C. 801 *et seq.*), this rule is not a major rule. It does not have an effect on the economy of $100 million or more, will not cause a major increase in costs or prices for consumers, and does not have significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises.

Executive Order 12630

Title VIII of ANILCA requires the Secretaries to administer a subsistence priority on public lands. The scope of this Program is limited by definition to certain public lands. Likewise, these regulations have no potential takings of private property implications as defined by Executive Order 12630.

Unfunded Mandates Reform Act

The Secretaries have determined and certify pursuant to the Unfunded Mandates Reform Act, 2 U.S.C. 1502 *et seq.*, that this rulemaking will not impose a cost of $100 million or more in any given year on local or State governments or private entities. The implementation of this rule is by Federal agencies and there is no cost imposed on any State or local entities or Tribal governments.

Executive Order 12988

The Secretaries have determined that these regulations meet the applicable standards provided in §§ 3(a) and 3(b)(2) of Executive Order 12988, regarding civil justice reform.

Executive Order 13132

In accordance with Executive Order 13132, the rule does not have sufficient Federalism implications to warrant the preparation of a Federalism Assessment. Title VIII of ANILCA precludes the State from exercising subsistence management authority over fish and wildlife resources on Federal lands unless it meets certain requirements.

Executive Order 13175

The Alaska National Interest Lands Conservation Act does not provide rights to Tribes for the subsistence taking of wildlife, fish, and shellfish. However, the Board provided Federally recognized Tribes and Alaska Native Corporations an opportunity to consult on this rule. Consultation with Alaska Native Corporations is based on Public Law 108–199, div. H, Sec. 161, Jan. 23, 2004, 118 Stat. 452, as amended by Public Law 108–447, div. H, title V, Sec. 518, Dec. 8, 2004, 118 Stat. 3267, which provides that: "The Director of the Office of Management and Budget and all Federal agencies shall hereafter consult with Alaska Native Corporations on the same basis as Indian Tribes under Executive Order No. 13175."

The Secretaries, through the Board, provided a variety of opportunities for Tribal consultation: commenting on proposed changes to the existing rule; engaging in dialogue at the Regional Council meetings; engaging in dialogue at the Board's meetings; and providing input in person, by mail, e-mail, or phone at any time during this rulemaking process.

Executive Order 13211

This Executive Order requires agencies to prepare Statements of Energy Effects when undertaking certain actions. However, this rule is not a significant regulatory action under E.O. 13211, affecting energy supply, distribution, or use, and no Statement of Energy Effects is required.

Drafting Information

Theo Matuskowitz drafted these regulations under the guidance of Dr. Polly Wheeler of the Office of Subsistence Management, Alaska Regional Office, U.S. Fish and Wildlife Service, Anchorage, Alaska. Additional assistance was provided by:

- Daniel Sharp, Alaska State Office, Bureau of Land Management;
- Sandy Rabinowitch and Nancy Swanton, Alaska Regional Office, National Park Service;
- Dr. Glenn Chen, Alaska Regional Office, Bureau of Indian Affairs;
- Jerry Berg, Alaska Regional Office, U.S. Fish and Wildlife Service; and
- Steve Kessler, Alaska Regional Office, U.S. Forest Service.

List of Subjects

36 CFR Part 242

Administrative practice and procedure, Alaska, Fish, National forests, Public lands, Reporting and recordkeeping requirements, Wildlife.

50 CFR Part 100

Administrative practice and procedure, Alaska, Fish, National forests, Public lands, Reporting and recordkeeping requirements, Wildlife.

Regulation Promulgation

For the reasons set out in the preamble, the Federal Subsistence Board amends title 36, part 242, and title 50, part 100, of the Code of Federal Regulations, as set forth below.

PART SUBSISTENCE MANAGEMENT REGULATIONS FOR PUBLIC LANDS IN ALASKA

■ 1. The authority citation for both 36 CFR part 242 and 50 CFR part 100 continues to read as follows:

Authority: 16 U.S.C. 3, 472, 551, 668dd, 3101–3126; 18 U.S.C. 3551–3586; 43 U.S.C. 1733.

Subpart B—Program Structure

■ 2. Amend § __.10 by revising paragraphs (b)(1) and (d)(2) to read as follows:

§ __.10 Federal Subsistence Board.

* * * * *

(b) * * *

(1) The voting members of the Board are: A Chair to be appointed by the Secretary of the Interior with the concurrence of the Secretary of Agriculture; two public members who possess personal knowledge of and direct experience with subsistence uses in rural Alaska to be appointed by the Secretary of the Interior with the concurrence of the Secretary of Agriculture; the Alaska Regional Director, U.S. Fish and Wildlife Service; Alaska Regional Director, National Park Service; Alaska Regional Forester, U.S. Forest Service; the Alaska State Director, Bureau of Land Management; and the Alaska Regional Director, Bureau of Indian Affairs. Each Federal agency member of the Board may appoint a designee.

* * * * *

(d) * * *

(2) A quorum consists of five members.

* * * * *

Dated: August 31, 2011.

Ken Salazar,

Secretary of the Interior, Department of the Interior.

Dated: August 16, 2011.

Beth G. Pendleton,

Regional Forester, USDA—Forest Service.

[FR Doc. 2011–23243 Filed 9–9–11; 8:45 am]

BILLING CODE 4310–55–P; 3410–11–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R09–OAR–2011–0733; FRL–9462–1]

Interim Final Determination to Stay and Defer Sanctions, San Joaquin Valley Unified Air Pollution Control District

AGENCY: Environmental Protection Agency (EPA).

ACTION: Interim final rule.

SUMMARY: EPA is making an interim final determination to stay the imposition of offset sanctions and to defer the imposition of highway sanctions based on a proposed approval of revisions to the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) portion of the California State Implementation Plan (SIP) published elsewhere in this **Federal Register**. The revisions concern SJVUAPCD Rule 4684, Polyester Resin Operations.

DATES: This interim final determination is effective on September 12, 2011. However, comments will be accepted until October 12, 2011.

ADDRESSES: Submit comments, identified by docket number EPA–R09–OAR–2011–0733, by one of the following methods:

1. *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the on-line instructions.
2. E-mail: *steckel.andrew@epa.gov.*
3. *Mail or deliver:* Andrew Steckel (Air-4), U.S. Environmental Protection Agency Region IX, 75 Hawthorne Street, San Francisco, CA 94105–3901.

Instructions: All comments will be included in the public docket without change and may be made available online at *http://www.regulations.gov,* including any personal information provided, unless the comment includes Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Information that you consider CBI or otherwise protected should be clearly identified as such and should not be submitted through *http://www.regulations.gov* or e-mail. *http://www.regulations.gov* is an "anonymous access" system, and EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send e-mail directly to EPA, your e-mail address will be automatically captured and included as part of the public comment. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment.

Docket: Generally, documents in the docket for this action are available electronically at *http://www.regulations.gov* and in hard copy at EPA Region IX, 75 Hawthorne Street, San Francisco, California. While all documents in the docket are listed at *http://www.regulations.gov,* some information may be publicly available only at the hard copy location (*e.g.,* copyrighted material, large maps), and some may not be publicly available in either location (*e.g.,* CBI). To inspect the hard copy materials, please schedule an appointment during normal business hours with the contact listed in the **FOR FURTHER INFORMATION CONTACT** section.

FOR FURTHER INFORMATION CONTACT: David Grounds, EPA Region IX, (415) 972–3019, *grounds.david@epa.gov.*

SUPPLEMENTARY INFORMATION: Throughout this document, "we," "us" and "our" refer to EPA.

I. Background

On January 26, 2010 (75 FR 3996), we published a limited approval and limited disapproval of SJVUAPCD Rule 4684, as adopted locally on September 20, 2007 and submitted by the State on March 7, 2008. We based our limited disapproval action on certain deficiencies in the submittal. This disapproval action started a sanctions clock for imposition of sanctions pursuant to section 179 of the Clean Air Act (CAA) and our regulations at 40 CFR 52.31. Under 40 CFR 52.31(d)(1), offset sanctions apply eighteen months after the effective date of a disapproval and highway sanctions apply six months after the offset sanctions, unless we determine that the deficiencies forming the basis of the disapproval have been corrected.

On August 18, 2011, SJVUAPCD adopted revisions to Rule 4684 that were intended to correct the deficiencies identified in our limited disapproval action. On July 22, 2011, the State submitted a proposed rule with request for parallel processing to EPA. In the Proposed Rules section of today's **Federal Register**, we have proposed full approval of the rule once we receive the final adopted version as a revision to the California SIP because we believe it corrects the deficiencies for SJVUAPCD Rule 4684 identified in our January 26, 2010 disapproval action. Based on today's proposed approval, we are taking this final rulemaking action, effective on publication, to stay the imposition of the offset sanctions and to defer the imposition of the highway sanctions triggered by our January 26, 2010 limited disapproval. This action only addresses SJVUAPCD Rule 4684.

U.S. FISH and WILDLIFE SERVICE
BUREAU of LAND MANAGEMENT
NATIONAL PARK SERVICE
BUREAU of INDIAN AFFAIRS

FWS/OSM11071.TM

Federal Subsistence Board
1011 E. Tudor Rd., MS 121
Anchorage, Alaska 99503-6199

JUL 22 2011

U.S. FOREST SERVICE

Andy Loranger, Refuge Manager
Kenai National Wildlife Refuge
P.O. Box 2139
Soldotna, Alaska 99669-2139

Dear Mr. Loranger:

This letter responds to your May 23, 2011, request for an emergency special action to adjust the harvest limits and require the sealing of antlers for moose in Units 7 remainder, 15A remainder, 15B and 15C during the August 10 – September 20 season. Emergency special actions are authorized by Federal regulation in 36 CFR 242.19(a) and 50 CFR 100.19(a). The Federal Subsistence Board has reviewed your request and has approved the emergency special action to adjust the regulations to read as such:

Unit 7 remainder

1 antlered bull with ~~spike-fork or~~ 50-inch antlers or with ~~3~~ 4 or more brow tines on either antler, by Federal registration permit only. ***Antlers are required to be inspected and sealed by an authorized representative.***	*Aug. 10- Sept. 20*

Units 15A remainder, 15B and 15C Moose

1 antlered bull with ~~spike-fork or~~ 50-inch antlers or with ~~3~~ 4 or more brow tines on either antler, by Federal registration permit only. ***Antlers are required to be inspected and sealed by an authorized representative.***	*Aug. 10- Sept. 20*

This emergency special action is effective as of July 19, 2011, and may not exceed 60 days unless the procedures for adoption of a temporary special action as defined in 36 CFR 242.19(b) and 50 CFR 100.19(b) have been met. Office of Subsistence Management (OSM) staff has been

directed to make the appropriate adjustments to the Federal Subsistence Permitting System. Please contact Ms. Michelle Chivers at 907-786-3877 if you have any questions.

Sincerely,

Tim Towarak
Chair, Federal Subsistence Board

Enclosure (1)

cc: Federal Subsistence Board
Interagency Staff Committee
Chugach National Forest Supervisor's Office
USDA – Forest Service Seward Ranger District

WSA11-02 Received 23 May 11

FEDERAL EMERGENCY SPECIAL ACTION REQUEST

Your Name and Organization:
U.S. Fish and Wildlife Service
Kenai National Wildlife Refuge

Mailing address:
P.O. Box 2139; Ski Hill Road
Soldotna, Alaska 99669-2139

Daytime telephone: 907-262-7021 **Fax Number:** 907-262-3599

This proposal suggests a change to (check all that apply):

____ Harvest season(s) ___ Methods and means of harvest
__x_ Harvest limit(s)

1. **What regulation do you wish to change?** (Include fishing district or area, species, and current regulation, if possible.)

   Moose:

   Unit 15A remainder, Unit 15B, and 15C – 1 antlered bull with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler, by Federal registration permit only. Aug. 10 – Sept. 20

   Unit 7 remainder – 1 antlered bull with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler, by Federal registration permit only. Aug. 10 – Sept. 20

2. **How should the new regulation read?** (Write the regulation the way you would like to see it written.)

   Moose:

   Unit 15A remainder, Unit 15B, and 15C – 1 antlered bull with ~~a spike antler on either side, or~~ 50-inch antlers or antlers with ~~3~~ **4** or more brow tines on either antler, by Federal registration permit only. **Antlers of moose harvested must be taken to ADF&G (Soldotna or Homer) for sealing within 10 days of harvest.** Aug. 10 – Sept. 20

   Unit 7 remainder – 1 antlered bull with ~~a spike antler on either side, or~~ 50-inch antlers or antlers with ~~3~~ **4** or more brow tines on either antler, by Federal registration permit only. **Antlers of moose harvested must be taken to ADF&G (Soldotna or Homer) for sealing within 10 days of harvest.** Aug. 10 – Sept. 20

3. Why should this regulation change be made?

Recent moose composition surveys indicate that there are conservation concerns for the moose population in Units 7 and 15 with low and declining bull:cow ratios (9 bulls:100 cows in portions of the area). The intent is to reduce harvest of bulls to address these conservation concerns. The Alaska Board of Game (BOG) took similar action in March 2011 for the State season, and without similar action in Federal regulations any conservation gains may be compromised as the majority of land in Units 7 and 15 is Federal public land.

4. What impact will this change have on wildlife/fish populations?

Given the recent regulatory changes adopted by the BOG for moose hunting in Units 7 and 15, State regulations are now considerably more restrictive than Federal regulations. This difference creates a substantial incentive for Federally-qualified users to shift their efforts to hunt under Federal regulations on Federal public lands. If this SAR is not adopted and this shift in harvest effort by subsistence users occurs, the recovery of the bull:cow ratios to objective levels would be compromised. Continued low bull:cow ratios would negatively impact productivity of moose populations.

5. How will this change affect subsistence users?

Current levels of moose harvest under Federal subsistence regulations are low. If adopted, this proposed change will reduce subsistence opportunity for hunting moose in Units 7 and 15 in an effort to address conservation concerns over low bull:cow ratios. It is anticipated that harvest opportunity may be reduced by as much as 80% in the short term, but overall this action would be favorable to subsistence users once the conservation concern has improved as bull:cow ratios recover to objective levels. Adopting this SAR would establish the same antler restrictions as the State season while maintaining a longer season for Federally-qualified subsistence users. In addition, if this special action is adopted it would require subsistence users to have the antlers of moose harvested sealed by ADF&G within 10 days of harvest.

The antler restrictions adopted by the BOG for the 2011 State season are scheduled to be revisited and assessed after two hunting seasons, at which time it is anticipated that a new, long-term moose harvest management strategy for Units 7 and 15 will be developed.

Proposals WP12-30 and -31 were submitted to the Federal Subsistence Board to address this issue. The Federal Subsistence Board will address these proposals at its January 2012 meeting.

6. How will this change affect other uses, i.e. sport/recreational and commercial?

The same antler restrictions were adopted by the BOG for the upcoming 2011 State season in Units 7 and 15, with the State season dates remaining the same (August 20 to September 20). Adopting this SAR would mirror the antler restriction for all users while allowing Federally qualified users a longer season. The affects to sport/recreational users would be minimal, as all users would benefit from increasing bull:cow ratios to objective levels as quickly as possible while retaining some harvest opportunity.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
1011 E. Tudor Road
Anchorage, Alaska 99503-6199

IN REPLY REFER TO
FWS/OSM 11076.TM

AUG 23 2011

Mr. Mark King
Native Village of Eyak
P.O. Box 965
Cordova, Alaska 99574

Dear Mr. King:

This letter responds to your special action request to change the Federal harvest for your annual Memorial/Sobriety Day Potlatch.

As authorized by the Federal Subsistence Board, the Office of Subsistence Management has reviewed the request, and with the unanimous support of the Interagency Staff Committee, has approved this change for your cultural/education permit for this year.

The Board has delegated authority to the Cordova District Ranger for this permit. Please contact him at (907) 424-7661 to coordinate for your permit and clarify any questions you may have.

The Federal Subsistence Board recognizes the importance of cultural gatherings of people at ceremonies and feasts. I applaud the village's efforts to assist the community residents in the cultural harvest of moose to continue a customary and traditional pattern of sharing meat with one another.

Sincerely,

Polly Wheeler
Acting Assistant Regional Director
Office of Subsistence Management

Enclosure (2)

cc: Federal Subsistence Board
Interagency Staff Committee
Chair, Southcentral Alaska Subsistence Regional Advisory Council
USDA – Forest Service; Cordova District Ranger

TAKE PRIDE IN AMERICA

WSA 11-06

To Subsistence Policy Coordinator

Mark King
P.O. Box 965
Cordova, AK 99574
Phone: 424-2373
Cell: 907-242-4928
marking@gci.net

From: Native Village of Eyak

Special Action Request

Existing regulation: One permit will be issued by the Cordova District Ranger to the Native Village of Eyak to take one bull moose from Federal Public Lands in Units 6B or 6C for their annual Memorial/Sobriety Day Potlatch

Proposed Regulation: One permit will be issued by the Cordova District Ranger to the Native Village of Eyak to take one ~~bull~~ moose from Federal Public Lands in Units 6B or 6C for their annual Memorial/Sobriety Day Potlatch

Bull:cow ratio in recent years have made it difficult to harvest a bull moose in Units 6B and C. Additionally, NVE would prefer to take a cow moose when the bull numbers in the population are low. NVE has submitted a proposal in the regular wildlife cycle but any regulation changes would not take effect for the 2011 season. The hunter attempting to harvest a bull moose for NVE in 2010 spent approximately 30 days, burning several hundred dollars of fuel, while passing numerous opportunities to take a cow moose. NVE would like to have the option to take either sex moose for the 2011 annual Sobriety Potlatch.

Mark King

Mark King
Chairman of Native Village of Eyak Council

Season 1 Sep – 31 Dec

2010	11/7/10	
2009	9/28/09	Mark King
2008	9/23/08	
2007	11/5/07	
~~2006~~	~~10/15/06~~	~~Robert Cunningham~~
2005	10/23/05	Mark King
2004	10/17/04	
2003	10/17/03	
2002	10/23/02	Bud Janson

11/7/10

STAFF ANALYSIS
WSA11-06

ISSUES

Wildlife Special Action Request WSA11-06, submitted by the Native Village of Eyak, requests the take of one moose, rather than one bull moose, from Federal public lands in Units 6B or 6C for the 2011 Memorial/Sobriety Day Potlatch.

DISCUSSION

In support of the request, the proponent describes the difficulties in locating a bull moose for Memorial/Sobriety Day Potlatch harvest:

> Bull:Cow ratio in recent years have made it difficult to harvest a bull moose in Units 6B and C. Additionally, NVE would prefer to take a cow moose when the bull numbers in the population are low. NVE has submitted a proposal [WP12-28] in the regular wildlife cycle but any regulation changes would not take effect for the 2011 season. The hunter attempting to harvest a bull moose for NVE in 2010 spent approximately 30 days, burning several hundred dollars of fuel, while passing numerous opportunities to take a cow moose. NVE would like to have the option to take either sex moose for the 2011 annual Sobriety Potlatch.

Further discussion with the proponent indicates that the request is for an emergency special action, as the time frame for the request is September 13 to November 11, 2011 (less than 60 days). Under §__.19, Special actions, the Federal Subsistence Board may "modify the requirements for take for subsistence uses," provided an emergency action does not exceed 60 days (75 FR 63093, October 14, 2010).

The Cordova District Subsistence Biologist states that there are no conservation concerns with one moose of either sex being harvested from Federal public lands in Units 6B or 6C. On the contrary, it may be that given current low bull/cow ratios, a cow harvest might take some pressure off of the bull moose population (Burcham 2011, pers. comm.).

Existing Federal Regulation

Special Provision—Unit 6B or 6C

One permit will be issued by the Cordova District Ranger to the Native Village of Eyak to take one bull moose from Federal public lands in Unit 6B or 6C for their annual Memorial/Sobriety Day potlatch.

Proposed Federal Regulation

Special Provision--Unit 6B or 6C

One permit will be issued by the Cordova District Ranger to the Native Village of Eyak to take one ~~bull~~ moose from Federal public lands in Unit 6B or 6C for their annual Memorial/Sobriety Day potlatch.

Extent of Federal Public Lands

Federal public lands comprise approximately 82% of Unit 6B and include lands managed by the Chugach National Forest (90%), Bureau of Land Management (10%), and Wrangell-St.Elias National Park and Preserve (.1%). Federal public lands comprise approximately 64% of Unit 6C and 100% of the lands are managed by the Chugach National Forest.

Customary and Traditional Use Determination

All rural resident of Units 6A, 6B, and 6C have a positive customary and traditional use determination to harvest moose in Unit 6B and 6C.

Regulatory History

The Federal Subsistence Board adopted the current regulation at its May 2, 2000 meeting. Briefly, the Board recognized a customary and traditional use of moose for the Memorial/Sobriety Day potlatch, and concurred with the summary statement of Interagency Staff:

> The Native Village of Eyak's memorial sobriety potlatch is an annual reoccurring event, which the Board has endorsed by previous special actions. This would make it -- this would put it into the annual regulatory process whereby it would stand unless modified. Taking of one bull moose for ceremonial purposes will not significantly impact the moose population. And another persuasive piece of testimony that was provided at the Council meeting by one

> of the members is that these potlatches are attended, not only by the local residents, but by a cross-section of communities in Prince William Sound, which in our minds further legitimizes the event (FSB 2000:39).

The Native Village of Eyak submitted Proposal WP12-28 to be considered during the regular wildlife cycle requesting a permanent change to the regulations allowing the harvest to one moose, rather than one bull moose, from Federal public lands in Units 6B or 6C for the Memorial/Sobriety Day Potlatch. The Federal Subsistence Board will address Proposal WP12-28 in its January 2012 meeting. If the regulation is adopted, it will become effective July 1, 2012.

Note that State regulations 5 AAC 92.019 allow the taking of big game for certain religious ceremonies. Under this regulation permits were issued to the Alaska Federation of Natives in 2010 for a memorial potlatch. Federally qualified subsistence users may wish to pursue this option for memorial potlatches.

Effect of the Special Action Request

Harvesting one moose of either sex is not anticipated to have any effects on the moose population in Units 6B or 6C. Providing more certainty that a moose would be harvested for the 2011 Memorial/Sobriety Day Potlatch would benefit Federally qualified subsistence users. No effects are anticipated on non-Federally qualified users.

LITERATURE CITED

Burcham, M. 2011. Cordova District Subsistence Biologist. Personal communication: phone. US Forest Service. Cordova, AK.

FSB. 2000. Transcripts of the Federal Subsistence Board proceedings, May 2, 2000. Office of Subsistence Management, FWS. Anchorage, AK.

INTERAGENCY STAFF COMMITTEE RECOMMENDATION
WSA11-06

Support Special Action Request WSA11-06.

Justification

Adopting this Special Action Request would provide a higher likelihood that a moose would be harvested between September 13 and November 11, 2011 for the Memorial/Sobriety Day Potlatch, and is not anticipated to have any effects on the moose population in Units 6B or 6C.

Wrangell-St. Elias National Park
Subsistence Resource Commission

P.O. Box 439
Mile 106.8 Richardson Hwy.
Copper Center, AK 99573

August 4, 2011

Elwood Lynn
Superintendent
Wrangell-St. Elias National Park and Preserve
P.O. Box 439
Copper Center, AK 99573

Dear Superintendent Lynn:

At its August 4, 2011, meeting the Wrangell-St. Elias National Park Subsistence Resource Commission (SRC) discussed the Nabesna Off-Road Vehicle (ORV) Management Plan/ Final Environmental Impact Statement (FEIS). We would like to make the following comments:

- The Record of Decision (ROD) should emphasize that the intent of the management actions in the FEIS is to keep access open for subsistence and other traditional activities. If trails need to be closed temporarily, the amount of time that they are closed should be kept to a minimum.
- NPS should collaborate to the maximum extent possible with local residents and other trail users on big picture trail improvements.
- The SRC should be informed about the types of trail improvements that will be occurring during upcoming field seasons.
- SRC meetings should be held in affected areas when monitoring will be occurring.
- NPS should inform and invite the local public when monitoring will occur.
- The highest priority for trail repairs or improvements should go to those trails that would close to recreational use with signing of the ROD in order to restore access as soon as possible.
- Ahtna place names should be incorporated into the trail system, for example, used in informational brochures.
- NPS should allocate funding for staff to do monitoring on existing trails.

On a more general note, we recommend that the park address the issue of wilderness eligibility throughout the park and preserve. The FEIS addresses this issue in a small way in the Nabesna area, but we see a pressing need to take a comprehensive look at this issue at Wrangell-St. Elias.

Chairman: Bert Adams, Sr.; Members: Dan Stevens, Don Horrell, Don Welty, Gloria Stickwan, Ray Sensmeier, Robert Fithian, Sue Entsminger, Suzanne McCarthy

We would like to thank Bruce Rogers and Barbara Cellarius for working diligently with the SRC and local residents throughout the process to help us understand the Nabesna ORV EIS. Many thanks for their dedication and professionalism. We would like to also recognize the previous superintendent, Meg Jensen, for her work on the wilderness eligibility issue. We hope that this will set a precedent for future work between the park and the SRC.

Sincerely,

Suzanne McCarthy
Acting Chair

cc: NPS Alaska Regional Director

Chairman: Bert Adams, Sr.; Members: Dan Stevens, Don Horrell, Don Welty, Gloria Stickwan, Ray Sensmeier, Robert Fithian, Sue Entsminger, Suzanne McCarthy

National Park Service
U.S. Department of the Interior

Wrangell-St. Elias
National Park/Preserve

P.O. Box 439
Mile 105.5 Old Richardson
Highway
Copper Center, AK 99573

907-822-5234 phone
907-822-7216 fax

Wrangell-St. Elias National Park/Preserve

News Release

Date: August 22, 2011
For Immediate Release
Contact: Mark Keogh, 907-822-7223

Nabesna Off Road Vehicle Management Plan and Final Environmental Impact Statement

Copper Center, Alaska— The National Park Service (NPS) has released the Nabesna Off Road Vehicle Management Plan and Final Environmental Impact Statement (Final EIS). The Final EIS was written as one of the conditions of a settlement agreement resulting from a 2006 lawsuit filed against the NPS. The lawsuit challenged NPS issuance of permits for recreational Off Road Vehicle (ORV) use on nine trails in the Nabesna District of Wrangell-St. Elias National Park and Preserve. The trails have provided access for sport hunting and subsistence activities since before the park was established. Summer use of ORVs on the trails has resulted in degraded trail conditions and impacts to wetlands, soils, and vegetation.

The NPS published a Draft EIS in August 2010 and made it available for a 90-day public review period. The Final EIS includes NPS responses to public comments that were received on the Draft EIS. The Final EIS also includes changes that were made as a result of the public comments on the Draft EIS. The most significant change is the analysis of a sixth management alternative. This alternative responds to public comment and is a combination of Alternatives 4 and 5 that were analyzed in the Draft EIS. The NPS has identified the sixth alternative as its preferred alternative in the Final EIS. Basic elements of the sixth alternative include the following:

- Trail improvement of all nine trails to a maintainable standard. Improvements would occur using a variety of trail management techniques, including re-routing existing trails to better ground and trail hardening using different materials such as gravel or Geoblock.
- Once trail improvements are in place, recreational ORV use would be permitted on trails in the national preserve; not in the national park.
- Subsistence ORV use would continue to occur, subject to monitoring to ensure that ORV use on unimproved trails would not result in an expansion of resource impacts.
- Construction of additional non-motorized trails in the area.

Now that the Final EIS is printed, a Notice of Availability (NOA) will be published in the Federal Register, on August 26, 2011. In addition, the Final EIS will be posted on the Planning Environment and Public Comment (PEPC) website at http://parkplanning.nps.gov and on the Wrangell St. Elias National Park and Preserve website at http://www.nps.gov/wrst. The NPS must wait 30 days after the NOA is published in the Federal Register before releasing a Record of Decision. The Record of Decision is the decision document for an EIS and describes the agencies decision and rationale for it.

Questions about the Final EIS can be directed to Bruce Rogers, Planner, at Wrangell-St. Elias National Park and Preserve, at 822-7276.

PSA

The National Park Service (NPS) has released the Nabesna Off Road Vehicle Management Plan and Final Environmental Impact Statement (Final EIS). The NPS published a Draft EIS in August 2010 and made it available for a 90-day public review period. The Final EIS includes NPS responses to public comments that were received on the Draft EIS. The Final EIS also includes changes that were made as a result of the public comments on the Draft EIS. A Notice of Availability (NOA) will be published in the Federal Register on August 26, 2011. In addition, the Final EIS will be posted on the Planning Environment and Public Comment (PEPC) website at http://parkplanning.nps.gov and on the Wrangell St. Elias National Park and Preserve website at http://www.nps.gov/wrst. The NPS must wait 30 days after the NOA is published in the Federal Register before releasing a Record of Decision.

Questions about the Final EIS can be directed to Bruce Rogers, Planner, at Wrangell-St. Elias National Park and Preserve, at 822-7276.

-NPS-

Cook Inlet Area Federal Subsistence Fisheries
2011 Harvest Summary (Updated August 23)

Subsistence Permits – A total of 130 subsistence fishing permits were issued during 2011 (Table 1). The majority of permits (81%) were issued for the Kenai River. No permits were issued for the winter ice fishery on Tustumena Lake. Just over half of the permits (53%) were issued to residents of Cooper Landing.

Table 1.–The number and type of federal subsistence fishing permits issued to residents in Cooper Landing, Hope, and Ninilchik during 2011.

	Community			
Subsistence Permit	Cooper Landing	Hope	Ninilchik	Total
Kenai River	69	18	19	106 (81%)
Kasilof River	N/A	N/A	24	24 (19%)
Tustumena Lake Ice Fishery	N/A	N/A	0	0
All Permits	69 (53%)	18 (14%)	43 (33%)	130

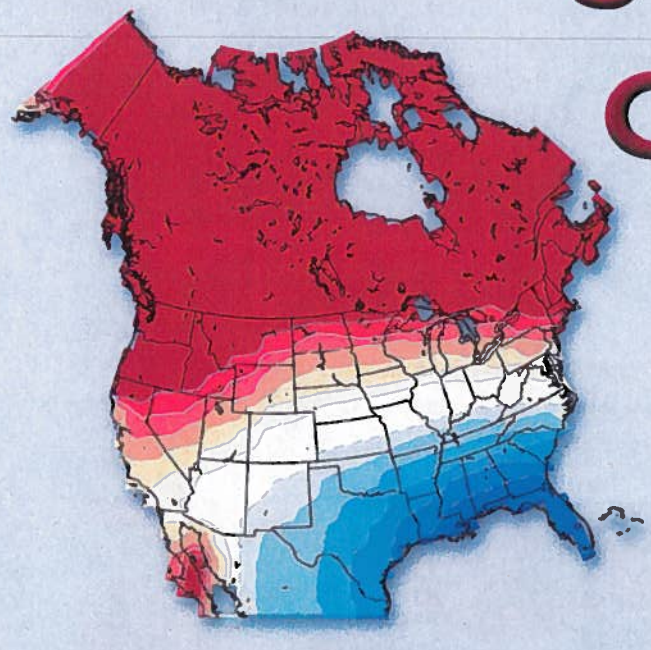
Subsistence Harvest – The reported subsistence harvest of sockeye salmon through August 23 is 813 fish from the Kenai River and 1 fish from the Kasilof River (Table 2). This level of harvest is similar to that observed during 2009 and 2010. The majority (99%) of the harvest reported to date has been from the Russian River Falls dip net fishery. Forty-five households from Cooper Landing and Hope participated in this fishery during 2011. No harvest has been reported for any species other than sockeye salmon. The Ninilchik Traditional Council completed the construction of a smaller fish wheel that was fished a few days on the upper Kasilof River during 2011, however no catch has been reported to date.

Table 2.–The number of salmon harvested in federal subsistence fisheries on the Kenai and Kasilof rivers by residents of Cooper Landing, Hope, and Ninilchik during 2011.

	Cooper Landing Residents			Hope Residents			Ninilchik Residents			
Subsistence Fishery	Sockeye	Coho	Chinook	Sockeye	Coho	Chinook	Sockeye	Coho	Chinook	Totals
Dip Net Fisheries										
Russian River Falls	698	N/A	N/A	109	N/A	N/A	0	N/A	N/A	807
Kenai River below Mile 48	0	0	0	0	0	0	0	0	0	0
Moose Range Meadows	0	0	0	0	0	0	0	0	0	0
Kasilof River	N/A	N/A	N/A	N/A	N/A	N/A	1	0	0	1
Rod and Reel Fisheries										
Upper Kenai/Russian River	6	0	N/A	0	0	N/A	0	0	N/A	6
Moose Range Meadows	0	0	0	0	0	0	0	0	0	0
Kasilof River	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0	0
Totals	704	0	0	109	0	0	1	0	0	814

Note: Rod and reel harvest numbers reported to date are likely conservative since there is no requirement for in-season reporting.

STATE OF THE CLIMATE IN 2010



HIGHLIGHTS

HIGHLIGHTS

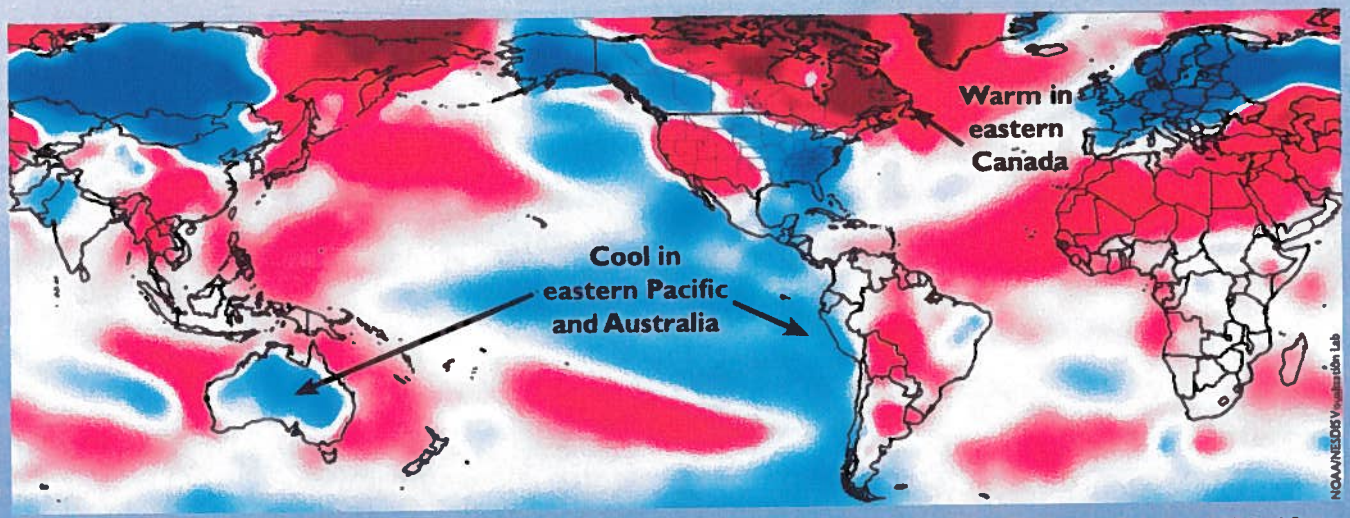
MAJOR EVENTS 2010

Flooding in Australia. Snowstorms in the eastern United States. The coldest winter in modern British history. During 2010, two of the world's major climate patterns—the El Niño-Southern Oscillation and the Arctic Oscillation—drove many of the year's most memorable weather events.

During 2010, two of the world's major climate patterns drove many of the year's most memorable weather events.

Searing heat in Russia. Floods in Pakistan. On the other hand, some events of 2010 had no apparent connection to large-scale climate patterns or trends, but were examples of unusual, extreme weather. In the background of many unique events, long-term trends are visible in the data; despite snow and cold in some locations, tens of thousands of observations around the world combine to reveal a 2010 average global surface temperature among the two warmest years on record.

This document gives a brief view of climate data collected around the world in 2010, used by scientists to understand the planet's climate patterns and trends.



December 2010: Surface air temperatures show a cool eastern Pacific and Australia influenced by La Niña. Cold air in the eastern United States and an unusually warm eastern Canada/Western Greenland are both influenced by the negative Arctic Oscillation.

El Niño to La Niña

The transition from a warm El Niño climate pattern at the beginning of the year to a strong version of its cool sister pattern, La Niña, by July contributed to some unusual weather around the globe in 2010.

Quiet year for tropical cyclones, except in the North Atlantic

The La Niña pattern brought cooler temperatures to the tropical eastern Pacific Ocean in the second half of 2010. Since cyclones get energy from ocean heat, that cooler water helped give the Eastern Pacific hurricane basin an extremely quiet season. Meanwhile, during an unusually active Atlantic season, no hurricanes made landfall in the United States while eastern Canada experienced one of its most active tropical cyclone seasons on record.

Learn more at: http://www.elnino.noaa.gov.

Global land and ocean surface temperatures among warmest ever recorded

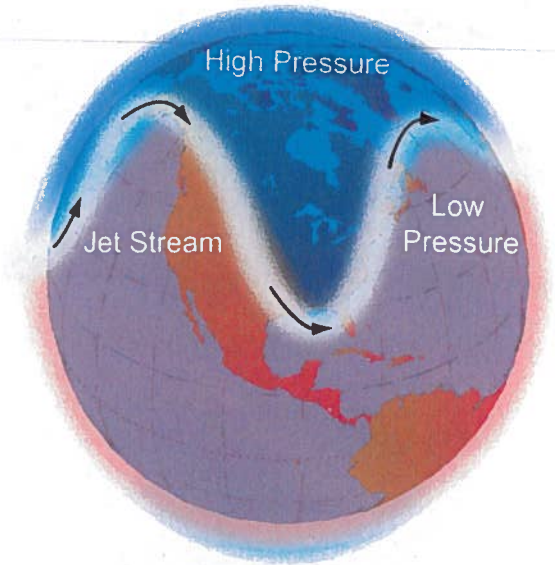
Warm land and ocean surface temperatures worldwide in 2010 were at least partly related to the El Niño climate pattern that prevailed in the first half of the year. The warm water temperatures and related air patterns, combined with a decades-long warming trend, were influential in making 2010's global temperatures among the two warmest years on record.

Floods in Australia

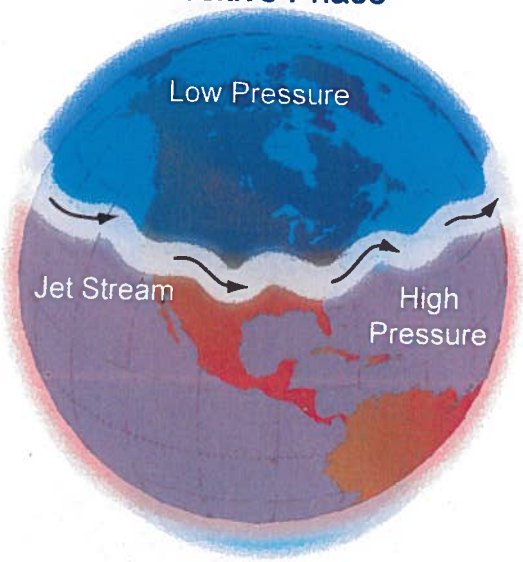
Australians were deluged with rain during late 2010. Influenced by the La Niña climate pattern, Australia experienced its wettest spring (in the Southern Hemisphere, September–November) since record keeping began 111 years ago. In December, precipitation in the state of Queensland was more than double the average amount.

Arctic Oscillation

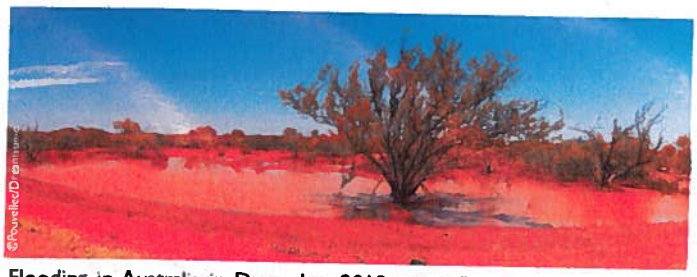
Negative Phase



Positive Phase



The negative phase Arctic Oscillation, as shown above, is similar to events in February 2010 over North America.



Flooding in Australia in December 2010 was influenced by the La Niña climate pattern.

MAJOR EVENTS 2010

Arctic Oscillation

The Arctic Oscillation, an atmospheric climate pattern that affects large parts of the Northern Hemisphere, most often keeps colder air confined in northern latitudes. When it switches to its negative phase, as it did in 2010, this frigid air can flow out of the Arctic and contribute to unusually cold weather farther south.

Severe winter storms in the eastern United States

Unusually heavy snow blanketed the East Coast at the beginning and end of 2010. Several cities, from Cincinnati to New York City, had their snowiest months on record during February, as the Arctic Oscillation reached its most negative value.

Cold winter in Europe

The strong negative Arctic Oscillation contributed to Britain's coldest winter (December 2009–February 2010) since the winter of 1978/79. Britain also experienced its coldest December on record in 2010 as much of Europe was affected once again by the arctic weather.

Mild winter in Canada

As the Arctic Oscillation remained negative throughout most of the year, Canada recorded its warmest year since records began in 1948. Oscillations in the jet stream allowed warm air to flow far north in parts of Canada.

Southern Annular Mode

Ice growth in the Antarctic

Average sea ice volume in the Antarctic grew to an all-time record maximum in 2010. This accumulation of ice was related to a climate phenomenon known as the Southern Hemisphere Annular Mode.

Other Major Events

Heat wave in Russia

From late June through mid-August, Russia suffered from a searing heat wave. After 62 days of above-average heat, Russian officials attributed nearly 14,000 deaths to the unusual temperatures. This heat wave was caused by a persistent blocking pattern, which climate scientists do not currently see as part of any repeating or trending climate pattern.

Flooding in Pakistan

Floods at the end of July and early August 2010 displaced more than 20 million Pakistanis and inundated a fifth of the country following heavy monsoon rains. Scientists analyzing climate indicators from 2010 believe that this disaster was in part related to the same blocking pattern that contributed to the heat wave in Russia.

CLIMATE INDICATORS 2010

Dozens of climate indicators, measured by tens of thousands of instruments around the world, track the major components of Earth's climate system, including the atmosphere, land, ice, and oceans. Climate indicators from the upper atmosphere to the ocean floor are monitored around the world for the purpose of better understanding the global climate, from year to year and over longer time periods. These data inform the *State of the Climate in 2010* report.

STRATOSPHERIC TEMPERATURE, air in the upper layers of the atmosphere, continued to be colder than average. This is expected, given increased greenhouse gases and decreased ozone levels.

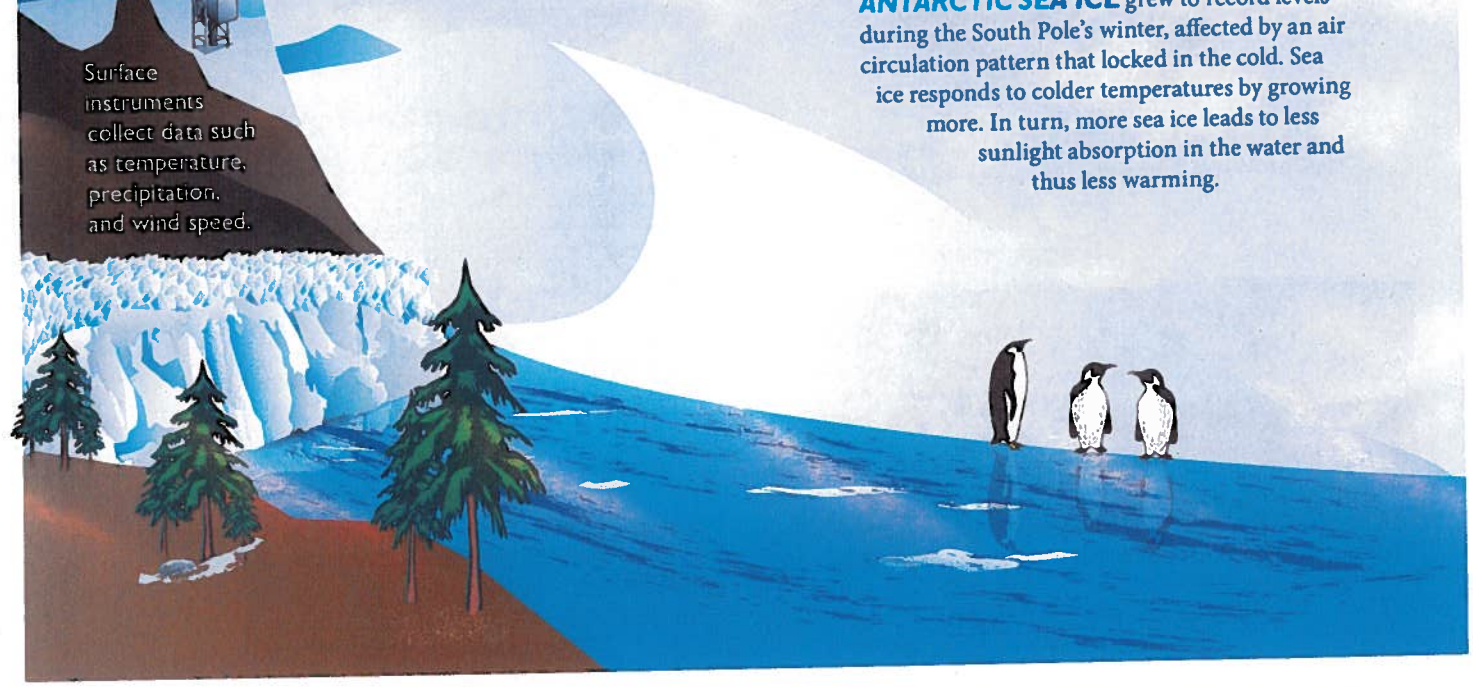
Levels of **GREENHOUSE GASES** in the atmosphere continued to rise. Carbon dioxide levels increased at a faster rate in 2010 than in 2009 and also faster than the average rate over the past 30 years. Greenhouse gases trap heat in Earth's lower atmosphere.

SNOW COVER during February was high over the Northern Hemisphere, but by May warm surface temperatures reduced it to the lowest area ever recorded by satellites. The decrease in snow cover from December to May was the largest in more than 40 years. The amount of snow and timing of melt affects the water cycle and water supply.

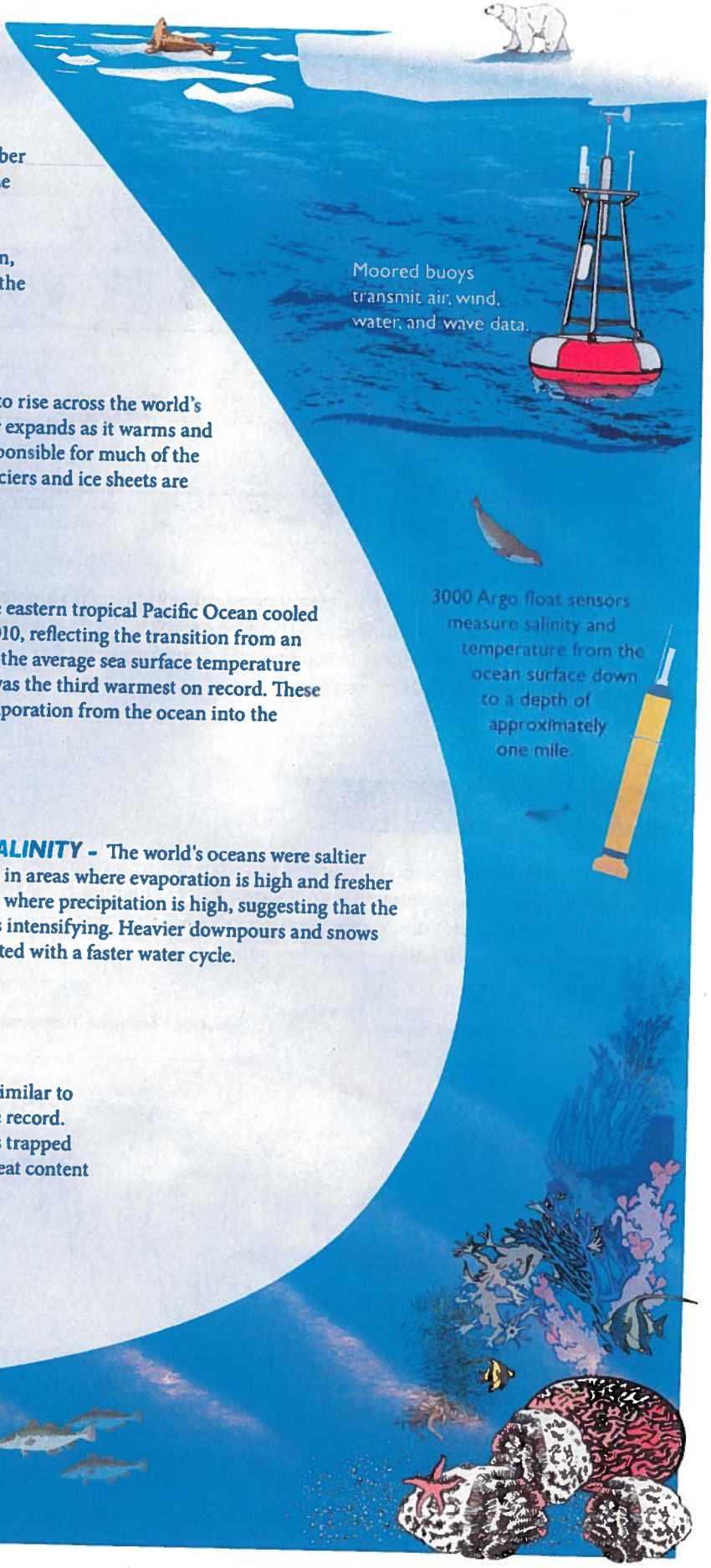
AIR TEMPERATURE above land was the second warmest on record. The Arctic continued to warm at about twice the rate of lower latitudes. Locally and regionally, changes in temperature can influence the distribution of expected weather, alter precipitation patterns, and affect trends in many other climate indicators.

The world's mountain **GLACIERS** lost mass for the 20th consecutive year. Greenland glaciers lost more mass in 2010 than any other year on record. Water from melting glaciers and ice sheets around the world contributes to acceleration of the water cycle and sea-level rise.

ANTARCTIC SEA ICE grew to record levels during the South Pole's winter, affected by an air circulation pattern that locked in the cold. Sea ice responds to colder temperatures by growing more. In turn, more sea ice leads to less sunlight absorption in the water and thus less warming.



ARCTIC SEA ICE shrank to its third smallest area on record. The area was so small in September that for the first time in modern history, both the Northwest Passage and the Northern Sea Route were open for navigation. Sea ice responds to warmer temperatures by shrinking more. In turn, less sea ice leads to more sunlight absorption in the water and thus more warming.



SEA LEVEL continued to rise across the world's oceans on average. Water expands as it warms and thus ocean heating is responsible for much of the sea-level rise; melting glaciers and ice sheets are responsible for the rest.

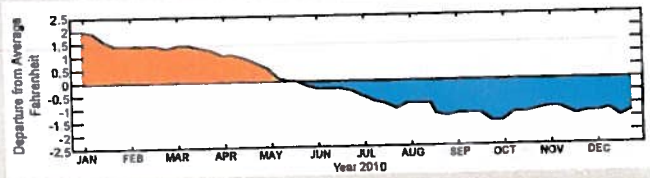
SEA SURFACE TEMPERATURE in the eastern tropical Pacific Ocean cooled almost 2 degrees Fahrenheit from 2009 to 2010, reflecting the transition from an El Niño to La Niña climate pattern. Even so, the average sea surface temperature for 2010 of all the oceans around the world was the third warmest on record. These warmer temperatures contribute to more evaporation from the ocean into the atmosphere and to changes in sea level.

OCEAN SALINITY - The world's oceans were saltier than average in areas where evaporation is high and fresher than average where precipitation is high, suggesting that the water cycle is intensifying. Heavier downpours and snows can be expected with a faster water cycle.

OCEAN HEAT CONTENT in 2010 was similar to 2009 and was among the highest values in the record. Oceans store a large portion of the heat that is trapped by increasing greenhouse gases. Changes in heat content contribute to changes in sea level.

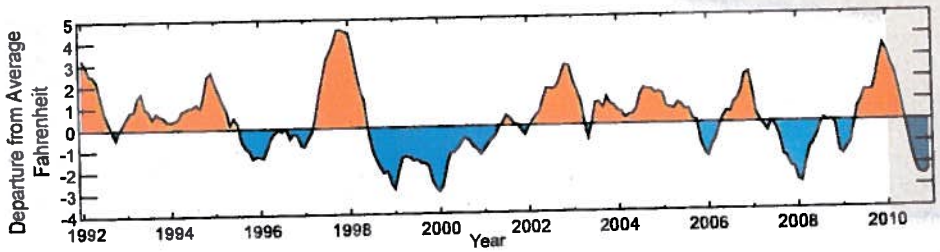
Climate Patterns and Long-Term Trends

Climate Patterns



In mid-2010, a year-long El Niño transitioned into the La Niña part of its pattern, as shown by the Pacific Ocean temperature variations from average.

El Niño/La Niña

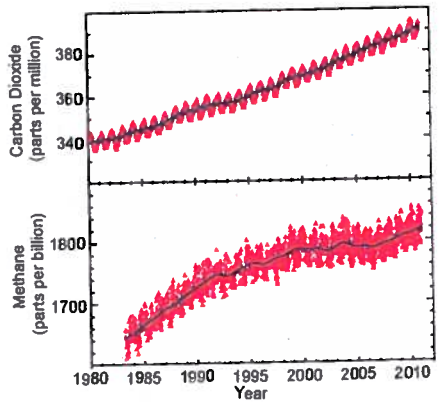


Throughout the complex ocean and air circulation patterns of Earth's climate system, large-scale climate patterns shift back and forth repeatedly. The Arctic Oscillation and El Niño/La Niña are examples of such patterns. Some patterns last for weeks at a time, while some can persist for years.

Long-Term Trends

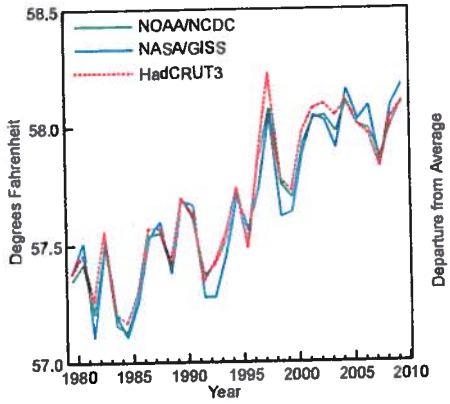
Even as the Earth is influenced by large-scale climate patterns, climate indicators continue to capture the underlying march of long-term trends, such as the steady increase in greenhouse gas concentrations and loss of Greenland's ice sheet.

Greenhouse Gases



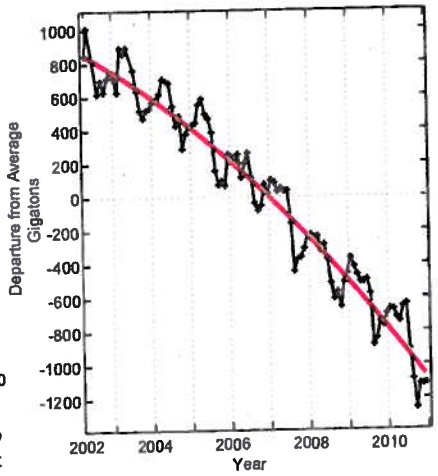
Air samples collected weekly at NOAA's Mauna Loa observatory continue to show a rise in the concentration of carbon dioxide and methane.

Global Surface Temperature



Global surface temperatures continue to rise, as 2010 was one of the two warmest years on record.

Greenland Ice Mass



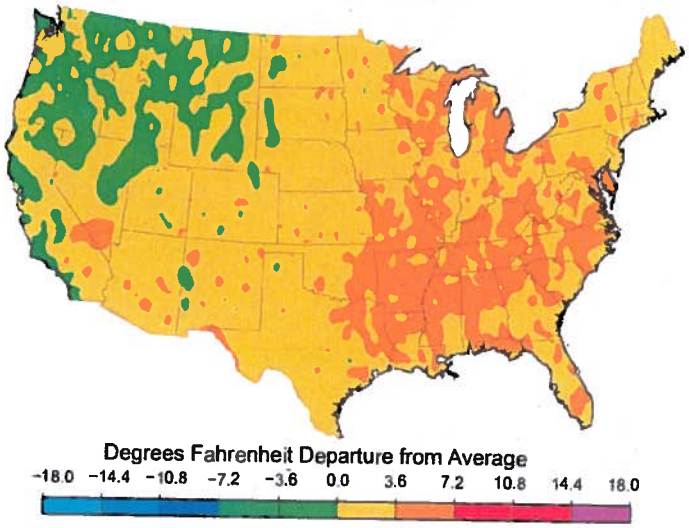
Greenland's ice sheet continues to lose mass, and in fact lost more mass in 2010 than at any time in the past ten years.

Climate Data and the U.S. Economy

Companies throughout the United States routinely reap the benefits of using climate data for planning and risk management. NOAA estimates that dependable climate data helps American companies save billions of dollars each year. For instance, NOAA's El Niño/La Niña forecasts are estimated to save nearly $100 million per year for United States agriculture in the Southeast alone by predicting areas that may be drier or wetter than usual.

Sector	Use of Climate Data
Agriculture	• Choose seed types and planting and harvesting schedules. • Plan for irrigation needs and forecast crop yields. • Match garden and landscape design to long term expected conditions.
Energy	• Forecast fuel needs and electricity demand based on expected conditions. • Analyze how temperature conditions affect demand. • Assess the best sites for solar and wind energy.
Water	• Manage reservoirs in drought or flood conditions. • Balance competing water demands such as industry, agriculture, recreation, and wildlife. • Understand spring snowmelt in the West and the impact on water supply.
Insurance	• Help businesses and individuals manage financial risks by designing insurance products based on raw and modeled climatic data such as temperature, wind, and sea surface temperatures.
Infrastructure	• Plan airports, roads, bridges, levees, and other infrastructure to withstand extreme weather conditions. • Design building performance for expected heating and cooling needs.
Health	• Prepare public health response measures such as cooling centers, vaccination programs, and epidemic action plans.

Summer 2010 Overnight Lows



The map above shows how "overnight lows" in the United States compared to normal during summer 2010. Twelve states in the East experienced their warmest summer on record; this warmth was driven by overnight lows, as opposed to hotter daytime highs.

Periods with unusually warm summer nights can affect:

Energy Demand

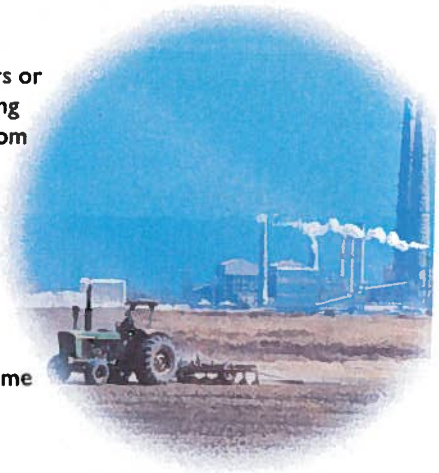
Above-average summer heat occurred on the East Coast, where energy demand is greater than it would be in less densely populated areas.

Public Health

Those who work outdoors or live without air conditioning have less recovery time from heat stress.

Agriculture

Many plants thrive when cooler nighttime temperatures allow some recovery from heat stress. When nights are hotter, some crop yields can drop.



Cover Notes:

Front: Photo–Vancouver B.C. had little snow when it hosted the 2010 Winter Olympics (AP Photo/Ricardo Mazalan).
Figure–Temperature anomalies in North America during winter 2010 (*State of the Climate Report in 2010* Fig. 7.5)
Back: Record-breaking snow fell on the Capitol in Washington, DC. February 2010. ©iStockphoto.com/DaveNewman

About *State of the Climate in 2010*

Purpose

State of the Climate in 2010 is the latest installment of an annual collection of climate observations from around the globe, edited at NOAA's National Climatic Data Center (NCDC) and published each year in the *Bulletin of the American Meteorological Society* (BAMS). Its purpose is to document dozens of observed climate indicators which, when viewed together, provide a picture of the world's climate system and our capacity to observe it.

Information in this Report

Climate indicators tracked in *State of the Climate in 2010* include temperature of the lower and upper atmosphere, precipitation, sea ice, greenhouse gases, humidity, cloud cover and type, glaciers, temperature and saltiness of the ocean, snow cover, and more. The report also documents extraordinary weather and climate events that took place during the year, and discusses climate patterns or trends to which they may relate.

Authors

Climate scientists in academic and scientific institutions around the world contribute articles about their own regions or areas of specialty. The articles are edited at NOAA's National Climatic Data Center in Asheville, NC. The *Bulletin of the American Meteorological Society* provides scientific peer reviewers for each chapter. More than 350 scientists from 48 countries contributed to *State of the Climate in 2010*. Their names and institutions are listed in the full report.

Find this Report Online

State of the Climate in 2010 and State of the Climate reports from past years are available online from NOAA's National Climatic Data Center: http://www.ncdc.noaa.gov/bams-state-of-the-climate. The site also provides access to raw data from the report for key climate indicators.

The series of annual *State of the Climate* reports incorporate information from NOAA's monthly National and Global Climate Summaries. These monthly reports are available at: http://www.ncdc.noaa.gov/sotc.

http://www.ncdc.noaa.gov/bams-state-of-the-climate/

Bulletin of the American Meteorological Society, Vol. 92, Issue 6 Supplement

Credits: Written by Jennifer Freeman (AMS), Jessica Blunden (STG, Inc.), and Derek Arndt (NCDC). All information based on the BAMS *State of the Climate in 2010* (Blunden *et al.* 2011). Graphic design and copy editing provided by NCDC Graphics Team: Sara Veasey (NCDC), Glenn M. Hyatt (NCDC), Deborah B. Riddle (NCDC), Deborah Misch (STG, Inc.), and Mara Sprain (STG, Inc.).

June 2011

Kenai-Russian River Collaborative Public Process
Working to Reduce Human-Bear Conflicts

Status Report to the Southcentral Alaska Subsistence Regional Advisory Council
October 3-4, 2011

The Kenai-Russian River area is an intensively used recreation area, valued by anglers and other visitors for its easy access to the popular roadside fishery and recreation site from mid June through early September. High human use – coupled with the abundant fishery – has led to periodic conflicts between the people who visit the area and bears that also come to the rivers.

In 2011, the US Forest Service (USFS) and US Fish and Wildlife Service (USFWS), in collaboration with the Alaska Department of Fish and Game and other members of the Russian River Interagency Coordination Group (RRICG),[1] has been working collaboratively with the public to consider ways to reduce adverse human-bear conflicts in the Kenai-Russian River area. Informed by the public process, the RRICG will prepare a five-year action plan and monitoring strategy for the area.

Minimizing negative bear-human encounters and related public/employee safety is the primary concern of the RRICG, while providing recreation opportunities and conserving fish and wildlife resources. Each year, the agencies that manage the Kenai-Russian River area work with the public to reduce the potential for human-bear conflicts.

Past management actions have included: management of how anglers handle harvested fish and fish waste; proper storage of human food, beverages and other bear attractants; public education about ways to avoid attracting bears to areas used by humans; regulatory enforcement; infrastructure improvements; and the use of temporary in-season access closures. In 2009 and 2010, there were no bears killed in defense of life or property (DLP) at the Kenai Russian River and no bear-caused human injuries reported. However, it is essential to continue to improve management actions and strategies at the area to further reduce the potential for human-bear conflicts.

A series of public forums was held in April 2011 (in Cooper Landing, Soldotna, Anchorage and Wasilla) to hear from the public about their experiences at the Kenai-Russian River area and the management actions and strategies they believe would reduce human-bear conflicts. People commented on a wide range of topics including: management of fish waste, public education, temporal and spatial closures, managing bear numbers and behaviors, regulating bear attractants, enforcement, facilities, trails, and other topics. A summary of the public forums is

---

[1] Additional members of the RRICG include: Alaska Department of Natural Resources Division of Parks and Outdoor Recreation, Kenaitze Indian Tribe, and Cook Inlet Region, Inc.

posted on the project website. Public comments have also been welcomed throughout the summer.

A second round of public forums is scheduled for late October 2011. Discussions at these meetings will build on the ideas contributed by the public to date – and will also be informed by research and evaluation that the management agencies have done to help determine which actions and strategies might be most appropriate, feasible and effective. At the October public forums, there will be agency presentations and ample time for public comments and collaborative discussion.

Schedule for October 2011 Public Forums:

Soldotna -- Tuesday, October 25, 6:00-9:00 p.m.
Gilman River Center
514 Funny River Road

Cooper Landing – Wednesday, October 26, 6:00-9:00 p.m.
Cooper Landing Community Center
Bean Creek Road

Anchorage -- Thursday, October 27, 6:00-9:00 p.m.
University of Alaska Anchorage, The Commons
3700 Sharon Gagnon Lane, Room 106

Public comments are welcome via email to: comments-alaska-chugach-seward@fs.fed.us
Please put "Kenai Russian River Comment" in the email's subject line.

Project website: https://projects.ecr.gov/kenai-russianriver/

Project facilitator: Jan Caulfield, 907-523-4610 (in Juneau), janc@gci.net

Shilah Butler
<sbutler@cvtc.org>
09/29/2011 01:54 PM

To "kathleen_mushovic@fws.gov" <kathleen_mushovic@fws.gov>, "barbara_cellarius@nps.gov" <barbara_cellarius@nps.gov>
cc
bcc
Subject Unit 11 Gaot harvest- Kenny Lake Residence

History: This message has been replied to and forwarded.

Kathleen Mushovic and Barbara Cellarius,

Please see attached letter from Jake Butler in regards to the Proposal WP12-27, we are hoping customary and traditional use determination for goat in unit 11 can be included. I am mailing the original to Ralph Lohse today. We are also hoping to attend via teleconference when this item is discussed, is that available or possible?

Thanks.

Shilah Butler
TECHNICAL SUPPORT & RECORDS SUPERVISOR
sbutler@cvtc.org
(907) 822-7924 phone
(907) 259-7924 cell

DOC338.PDF

Jake Butler
MP 6.5 Old Edgerton Hwy
HC 60 Box 335-S
Kenny Lake, AK 99573
September 29, 2011

Ralph E. Lohse, Chair
Southcentral Alaska Subsistence Regional Advisory Council
Office of Subsistence Management
U.S. Fish and Wildlife Service
1011 E. Tudor Road, Mail Stop 121
Anchorage, Alaska 99503

Dear Ralph E. Lohse:

This letter is in regards to Proposal WP12-27 which requests a positive customary and traditional use determination for goat in Unit 11 by residents of Tok Cutoff Road (mileposts 79-110) and Nabesna Road (mileposts 24-45). The proposal states that the residents of the proposal area may have been inadvertently omitted from the current customary and traditional use determination. I am concerned that Kenny Lake residents were omitted from the determination and now, excluded in this proposal.

My family has been residents of Kenny Lake since 1977. My father has been traditionally harvesting goat in Unit 11 since 1977. I started hunting with my father when I was eleven; this statement reflects many people and families in my community.

I am asking the Regional Advisory Council to include Kenny Lake residents in the positive customary and traditional use determination for goat in Unit 11 via Proposal WP12-27 or a future proposal if that is not possible.

Sincerely,

Jake Butler
Kenny Lake Resident

LAKE CLARK NATIONAL PARK
SUBSISTENCE RESOURCE COMMISSION
1 PARK PLACE
PORT ALSWORTH, AK 99653

September 23, 2011

Ms. Molly Chythlook, Chair
Bristol Bay Regional Advisory Council
Office of Subsistence Management
1011 East Tudor Road, Mail Stop 121
Anchorage, Alaska 99503

Dear Ms. Chythlook,

The Lake Clark National Park Subsistence Resource Commission (SRC) met on September 22, 2011 and considered the following wildlife proposals to make regulatory changes to the Federal Subsistence Program. With regard to WP12-01, 02, 03, 39 and WP10-45, 46, 47 and 48, the Lake Clark SRC makes the following recommendations:

WP12-01: *Statewide proposal to require sealing of brown bear claws intended for use in handicrafts for sale.*

No Position: The LACL SRC did not take a position on this proposal.

WP12-02: *Statewide proposal to amend the designated hunter provision.*

Support with Modification: The LACL SRC supports proposal 12-02 with modification to more closely mirror current State eligibility requirements for proxy hunting. The SRC recommends that qualified hunters be allowed to hunt for individuals who are blind, 70 percent physically disabled (as determined by a government agency for a physical disability or an affidavit signed by a physician), or over 6o years of age. This measure would reduce the possibility of abuse of the designated hunter provision by clearly defining who is eligible to use a designated hunter.

WP12-03: *Statewide proposal to require trappers to move a trap that incidentally harvests a moose, caribou or deer at least 300 feet for the remainder of the regulatory year and salvage the edible meat.*

No Position: The LACL SRC did not take a position on this proposal.

WP12-39: *To revise the Unit 17B and 17C moose seasons.*

Support: The LACL SRC supports combining the current regulations for hunting moose in Units 17B and 17C and requiring a state registration permit for the December 1–31 season. This proposal would benefit residents of Nondalton who have positive C&T for moose in

17B by creating an additional winter hunting opportunity that does not currently exist. The SRC further recommends that the state registration permits required to participate in the Unit 17B moose hunts be made available in Nondalton for the convenience of local residents.

WP10-45, 46, 47 and 48: *To require a state registration permit to hunt moose in Unit 9 and change the dates for the fall moose hunt in 9C and 9E.*

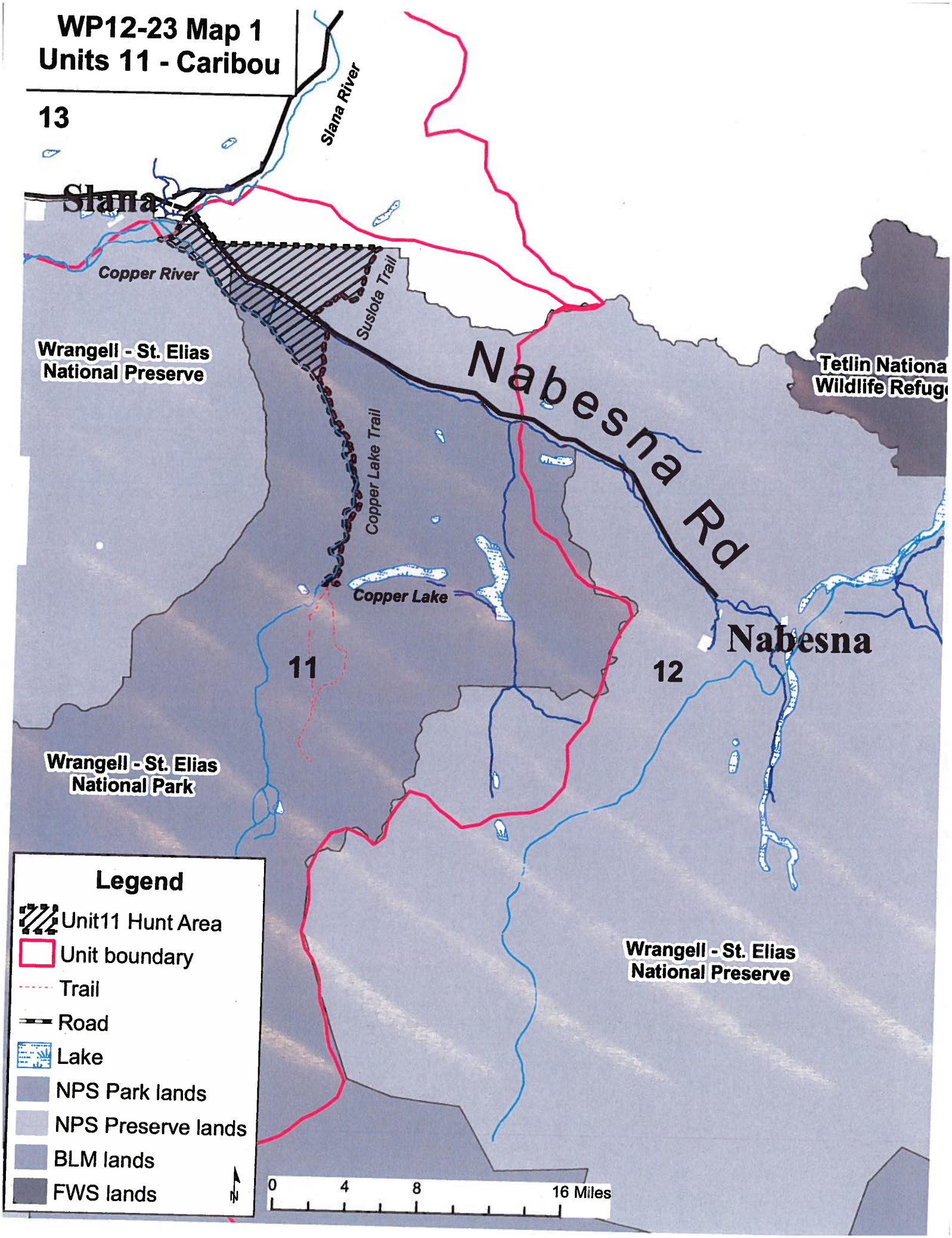
Support WP10-45 with Modification: The SRC has commented previously on proposals WP10-45, 46, 47 and 48 and was informed that the Bristol Bay RAC will be considering a modification to 10-45 that reflects actions taken by the Alaska Board of Game at their March 2011 meeting. The LACL SRC supports the proposed modification to WP10-45, which would align Federal and State permit requirements by requiring a state registration permit to harvest moose in Unit 9 and extend the end date of the 9C fall moose hunting season by five days from September 15 to September 20. No action was taken on proposals WP10-46, 47 and 48.

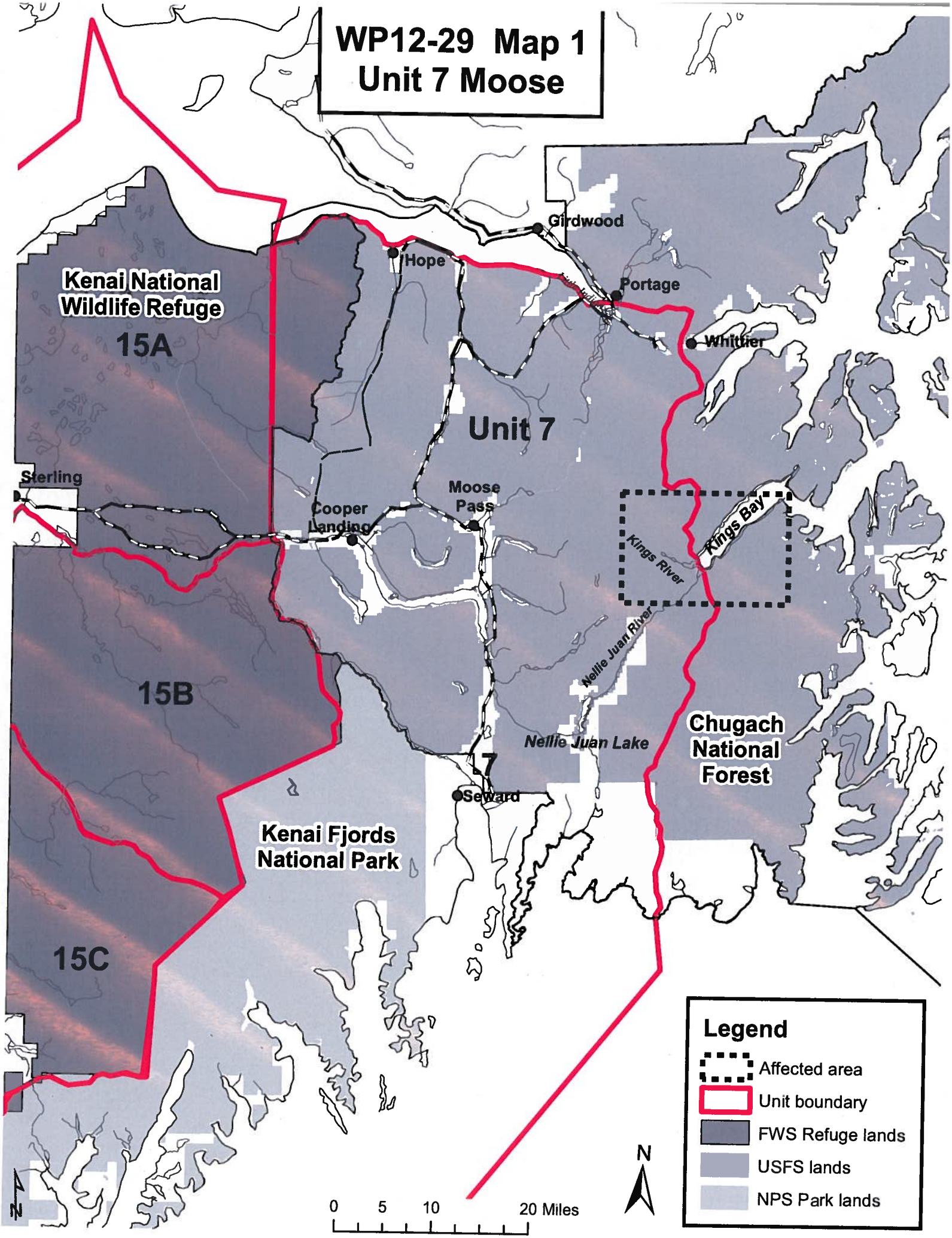
The Lake Clark National Park Subsistence Resource Commission appreciates the opportunity to share with you its recommendations on these federal subsistence proposals. If I can be of further assistance or provide additional information, you may contact me at (907) 781-2218.

Sincerely,

Glen Alsworth, Sr. Chair
Lake Clark National Park
Subsistence Resource Commission

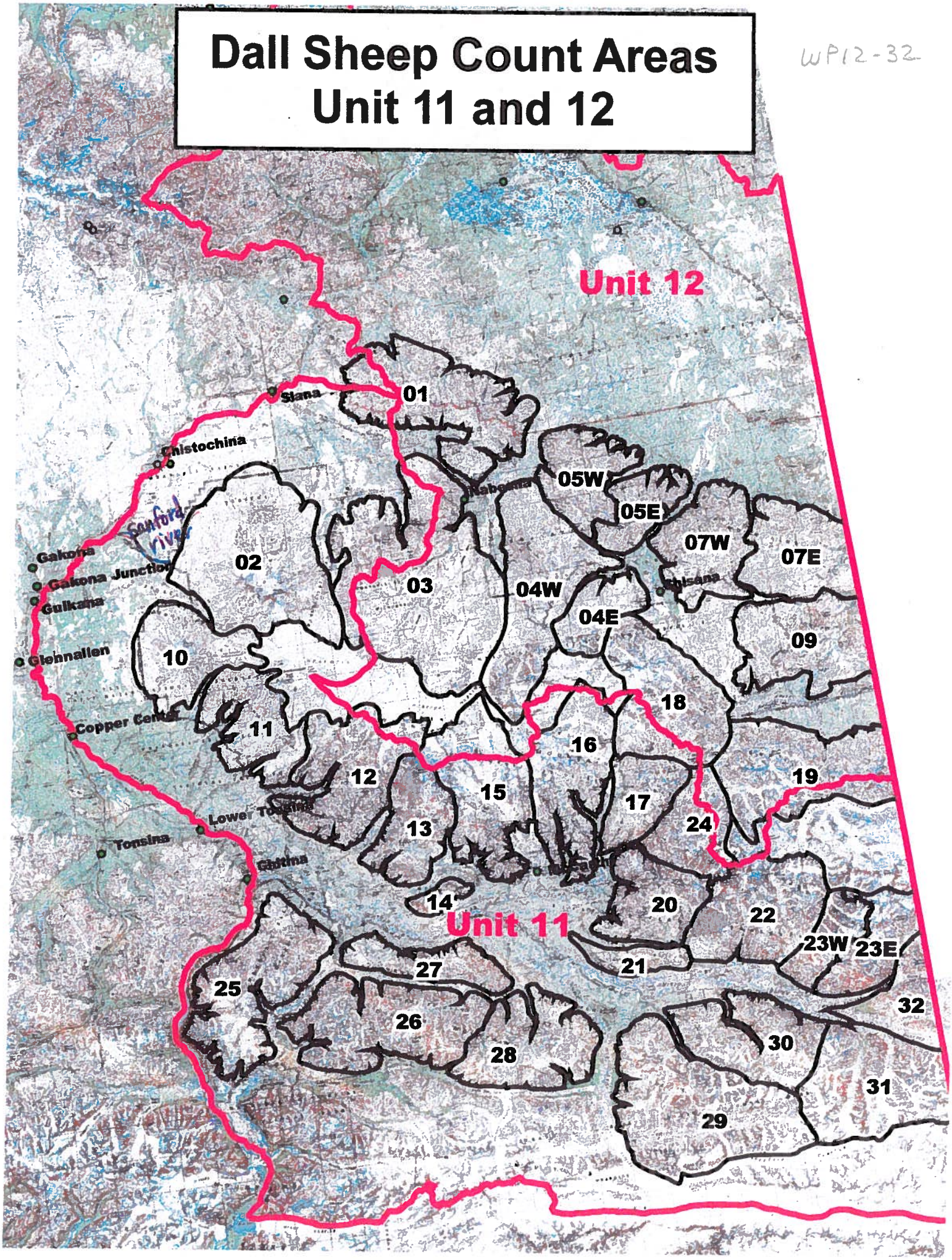
cc: Joel Hard
Dave Mills
Sandy Rabinowitch


WP12-23 Map 1
Units 11 - Caribou
13
Slana River
Slana
Copper River
Suslota Trail
Wrangell - St. Elias
National Preserve
Nabesna Rd
Tetlin National
Wildlife Refuge
Copper Lake Trail
Copper Lake
Nabesna
11
12
Wrangell - St. Elias
National Park
Wrangell - St. Elias
National Preserve
Legend
Unit11 Hunt Area
Unit boundary
Trail
Road
Lake
NPS Park lands
NPS Preserve lands
BLM lands
FWS lands
N
0
4
8
16 Miles


WP12-29 Map 1
Unit 7 Moose
Girdwood
Hope
Portage
Whittier
Kenai National Wildlife Refuge
15A
Unit 7
Sterling
Moose Pass
Cooper Landing
Kings Bay
Kings River
Nellie Juan River
15B
Nellie Juan Lake
Chugach National Forest
7
Seward
Kenai Fjords National Park
15C
Legend
Affected area
Unit boundary
FWS Refuge lands
USFS lands
NPS Park lands
N
0 5 10 20 Miles

Dall Sheep Count Areas
Unit 11 and 12

WP12-32



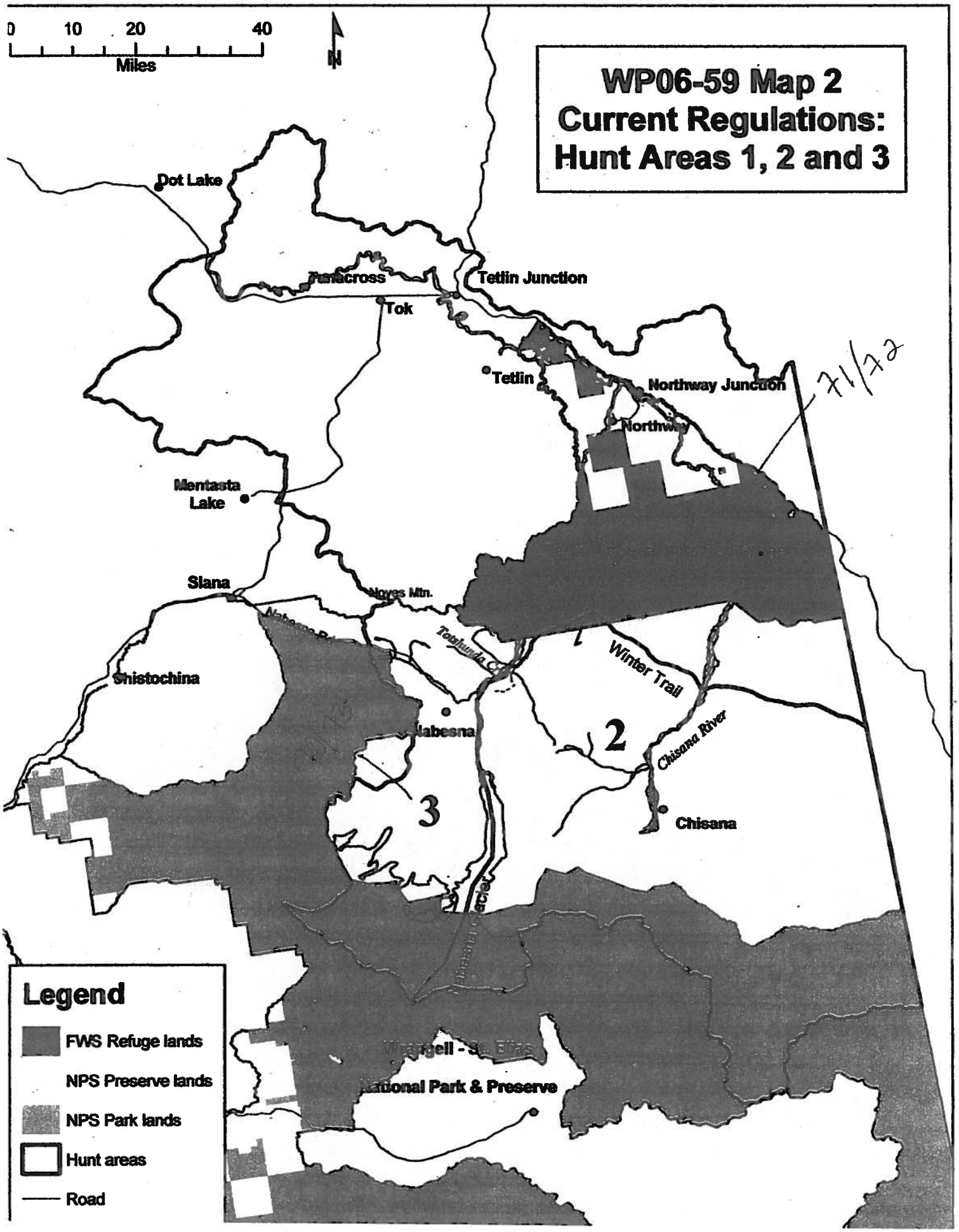

WP06-59 Map 2
Current Regulations:
Hunt Areas 1, 2 and 3
0 10 20 40
Miles
N
Dot Lake
Tanacross
Tetlin Junction
Tok
Tetlin
Northway Junction
Northway
Mentasta Lake
Slana
Noyes Mtn.
Tonsina Creek
Winter Trail
Shistochina
Gulkana
2
Chisana River
3
Chisana
Legend
FWS Refuge lands
NPS Preserve lands
NPS Park lands
Hunt areas
Road

Table 1. Summary of completed projects under the Fisheries Resource Monitoring Program in Southcentral Alaska since 2000. Abbreviations for investigators are: ADFG=Alaska Department of Fish and Game, CNTC=Cheesh'na Tribal Council, CRNA=Copper River Native Association, CRRC=Chugach Regional Resources Commission, CRWP=Copper River Watershed Project, FS=USDA Forest Service, Karie=Dr. Karie, LGL=LGL Ltd, MTC=Mentasta Tribal Council, NPS=National Park Service, NVE=Native Village of Eyak, PWSSC=Prince William Sound Science Center, and USFWS=U.S. Fish and Wildlife Service.

Project Number	Project Title	Investigators
	Copper River Salmon	
00-013	Tanada Creek Salmon Escapement	NPS
00-034	Miles Lake Sonar Improvement	FS, ADFG
00-040	Copper River Salmon Subsistence Fishery Evaluation	ADFG, CRNA
01-020	Copper River Chinook Salmon Feasibility of Abundance Estimate	NVE, LGL
01-021	Lower Copper River In-season Abundance Estimate	NVE, LGL, ADFG
01-217	Copper River Groups Capacity Building Workshop	CRNA, LGL
02-015	Copper River Chinook Salmon Radio Telemetry	ADFG, NVE
03-010	Upper Copper River C&T Subsistence Fish Harvests GIS Atlas	CRNA, LGL
04-501	Long Lake Sockeye Salmon Escapement	NPS,CRWP
04-502	Tanada Creek Salmon Escapement	NPS
04-503	Copper River Chinook Salmon Abundance Estimate	NVE, LGL
04-506	Lower Copper River In-season Abundance Estimate	NVE, LGL, ADFG
04-507	Copper River Chinook Salmon Genetics	ADFG, NVE, NPS
04-553	Copper River Salmon Runs Traditional Knowledge of Long Term	ADFG, NVE
05-501	Copper River Sockeye Salmon Spawning Distribution	NVE, ADFG
06-502	Copper River Sockeye Salmon Inriver Abundance	NVE, ADFG
07-502	Tanada Creek Salmon Weir	NPS
07-503	Copper River Chinook and Sockeye Salmon Abundance	NVE
07-505	Long Lake Salmon Weir	NPS, PWSSC
08-501	Copper River Sockeye Salmon Abundance	NVE
	Copper River Steelhead	
01-148	Copper River Steelhead Stock Status	ADFG, CRNA,USFWS
01-035	Copper River Steelhead Harvest Monitoring	NPS, CRNA
03-001	Cooper River Steelhead Population Biology	ADFG
05-502	Copper River Steelhead Abundance	ADFG, NVE
	Copper River Freshwater Species	
01-110	Copper River Non-Salmon Species Harvest and Use	CRNA, ADFG, CHVC, CNTC, Karie,
02-077	Upper Copper River Increasing GIS Capabilities	CRNA
07-501	Tanada and Copper Lakes Burbot Abundance	NPS, ADFG, MTC
	Copper River Eulachon	
02-075	Eulachon Subsistence Harvest Opportunities	NVE, FS, ADFG
	Prince William Sound Salmon	
00-035	Coghill Coho Salmon Weir	ADFG, FS
02-028	Chugach Region TEK Mapping	CRRC
03-033	Billy's Hole, PWS Salmon Stock Assessment	ADFG, CRRC, FS
	Cook Inlet	
00-038	Cooper Creek Dolly Varden Assessment	ADFG
00-041	Turnagain Arm Eulachon Subsistence Use & Assessment	FS
03-045	Cook Inlet Subsistence Fisheries Harvest Assessment	ADFG
07-506	Tustumena Lake Coho Salmon Spawning Assessment	USFWS
07-507	Kasilof Watershed Coho Salmon Radio Telemetry	USFWS
07-509	Kasilof Watershed Steelhead Trout Radio Telemetry	USFWS
08-502	Tustumena Lake Coho Salmon Assessment	USFWS
08-503	Kasilof River Steelhead Radio Telemetry	USFWS
08-504	Crooked and Nikoli Creeks Steelhead Weirs	USFWS

Table 2. Summary of ongoing 2012 projects funded under the Fisheries Resource Monitoring Program in Southcentral Alaska. Abbreviations for investigators are: ADF&G=Alaska Department of Fish and Game, ECO=Ecotrust, HDR=HDR Alaska, and NPS=National Park Service Service.

Project Number	Project Title	Investigators	Budget ($000) 2012	Budget ($000) 2013
	Copper River Salmon			
10-502	Tanda Creek Salmon Assessment	NPS	$67.4	$69.5
10-503	Copper River Chinook Salmon Assessment	NPS	$373.0	$373.0
10-505	Long Lake Salmon Assessment	NPS	$12.0	$12.7
10-552	Copper River Subsistence Harvest Validation	HDR, ECO, ADF&G	$42.9	$0.0
	Total Southcentral Alaska Monitoring Program		$495.3	$455.2

Table 3. Southcentral Alaska project costs, by organization (Alaska Native, State, Federal, other), for investigation plans submitted to the Fisheries Resource Monitoring Program for funding consideration in 2012.

Project Number	Title	Budget ($000s)			
		Alaska Native	State	Federal	Other
	Stock Status and Trends Projects				
12-500	Copper River Chinook Salmon RFID Feasibility	$76.4			
	Harvest Monitoring and Traditional Ecological Knowledge Projects				
12-550	Upper Copper R. Changing Environments & Subsistence		$44.6		$37.4

Table 4. Southcentral Alaska local hire and matching funds for investigation plans submitted to the Fisheries Resource Monitoring Program for funding consideration in 2012. Abbreviations used are: ECO=Ecotrust, and NVE=Native Village of Eyak.

Project Number	Lead Organization	Title	Funding ($000s) Local Hire	Funding ($000s) Matching
		Stock Status and Trends Projects		
12-500	NVE	Copper River Chinook Salmon RFID Feasibility	$0.0	$4.0
		Harvest Monitoring and Traditional Ecological Knowledge Projects		
12-550	ECO	Upper Copper R. Changing Environments & Subsistence	$0.0	$20.6

Table 5. Funding recommendations by the Technical Review Committee (TRC) for Southcentral Alaska, 2012 Fisheries Resource Monitoring Program.

Project Number	Title	TRC	Requested Budget ($000) 2012	2013	2014	2015
	Stock Status and Trends Projects					
12-500	Copper River Chinook Salmon RFID Feasibility	Yes	$76.4	$74.5	$0.0	$0.0
	Harvest Monitoring and Traditional Ecological Knowledge Projects					
12-550	Upper Copper R. Changing Environments & Subsistence	Yes	$82.0	$86.6	$0.0	$0.0
	Total		$158.4	$161.1	$0.0	$0.0
	Guideline		$135.0			
	TRC Recommendation		$158.4	$161.1	$0.0	$0.0

Federal Subsistence Board Consultation with Tribes Regarding Proposed Changes to 2012-2014 Federal Subsistence Wildlife Regulations

Southcentral Alaska Region

September 26, 2011
Teleconference: 10:00 a.m. to 11:20 a.m.

PARTICIPANTS

Tribes

1. Ninilchik Traditional Council—Greg Encelewski & Ivan Encelewski

Federal Subsistence Board members or their representative

1. Beth Pendleton —U.S. Forest Service, Lead FSB member
2. Polly Wheeler—U.S. Fish and Wildlife Service
3. Kristin K'eit—Bureau of Indian Affairs
4. Daniel Sharp—Bureau of Land Management
5. Dave Mills—National Park Service (part of meeting)
6. Sandy Rabinowitch— National Park Service (other part of meeting)

Federal Staff

1. Steve Kessler—U.S. Forest Service, Facilitator, Federal representative to help report out to the Southcentral Regional Advisory Council
2. Cal Casipit—U.S. Forest Service
3. Tim Joyce—U.S. Forest Service
4. Ruth D'Amico—U.S. Forest Service
5. Milo Burcham—U.S. Forest Service, Note taker
6. Jeremy Karchut—U.S. Forest Service
7. Jerry Berg—U.S. Fish and Wildlife Service
8. Andy Loranger—U.S. Fish and Wildlife Service
9. K.J. Mushovic—U.S. Fish and Wildlife Service, Southcentral Alaska Subsistence Regional Advisory Council (RAC) Coordinator
10. Sandy Rabinowitch—National Park Service
11. Barbara Cellarius—National Park Service
12. Jean Gamache—National Park Service
13. Dan Sharp—Bureau of Land Management

Following is a summary of consultation issues discussed and input received. The proposals have been placed in numeric order, although they were not discussed in that order.

Ninilchik Traditional Council (NTC) – Greg Encelewski and Ivan Encelewski

Current Proposals

1. WP12-22 – We support WP12-22. WP 12-22 was NTC's proposal. NTC was made aware of the recommendation for WP12-22 from the Kodiak/Aleutian RAC which is to reject the proposal.
2. WP12-30/31 – We oppose WP12-30/31; we have concerns about bull:cow ratios. However, this proposal would leave very little opportunity to harvest moose, would be a hardship on the community, and is unnecessary. Many spike/fork bull moose have been seen in the field; we believe that numerous bears, wolves and road kills are a problem. Harvesting only large bulls is not a good management strategy. Subsistence hunters from Ninilchik take approximately 6 moose per year from Unit 15. That level of harvest has little impact on the moose population. We would like to see federal subsistence hunters be allowed to harvest spike/fork bull moose. The assumption that more rural residents would hunt under federal regulations because of the changes to State regulation, and therefore harvest more moose, is incorrect. If there is a conservation concern it may be better to close the season altogether. Federal lands are a long distance away from the community of Ninilchik making it difficult to access, especially for elders.
3. WSA11-03 (Special Action) – We oppose WSA11-03 for the reasons discussed under WP12-30/31. Currently delegated in-season management authority could be used to prevent too many bull moose from being harvested as is done in fisheries management. We worry that these proposed short-term actions, adopted as long term actions (WP12-30/31), will not be taken out of regulation in the future.

Other topics

WSA11-02 -- It was improper for WSA11-02 (Special Action) to pass without tribal consultation and without support of the Regional Advisory Council (RAC). We were not allowed to comment on the special action request. A member attended the board meeting but was not allowed to testify. We felt it was a step backwards in the process. We are grateful for the opportunity to comment on WSA11-03.

NTC would like the opportunity to work with managers to develop a long-term strategy for managing moose population on the Kenai.

Facilitator Steve Kessler informed participants about the opportunity for tribes and corporations to consult with the Federal Subsistence Board regarding long term consultation protocols for the Federal Subsistence Program. The opportunity to do this for ANCSA corporations, for government-to-corporation consultation, will be during the AFN Convention in Anchorage at the Egan Center on the afternoon of Thursday October 20th. The in-person opportunity to comment on the development of the Tribal Consultation Protocol, for government-to-government consultation, will be during the BIA Tribal Service Providers Conference on December 1st from 1 p.m. to 5 p.m. at the Dena'ina Convention Center in Anchorage.

Greg Encelewski and Steve Kessler will present the notes from this discussion to the Southcentral RAC in Cantwell next week, after Greg and Ivan have a chance to review them for content. A written copy will be presented to the Federal Subsistence Board. All Southcentral tribal representatives can also testify in-person at the RAC and Board meetings.

Federal Subsistence Board Consultation with Tribes Regarding Proposed Changes to 2012-2014 Federal Subsistence Wildlife Regulations

Southcentral Alaska Region

September 26, 2011
Teleconference: 10:00 a.m. to 11:20 a.m.

PARTICIPANTS

Tribes

1. Ninilchik Traditional Council—Greg Encelewski & Ivan Encelewski

Federal Subsistence Board members or their representative

1. Beth Pendleton —U.S. Forest Service, Lead FSB member
2. Polly Wheeler—U.S. Fish and Wildlife Service
3. Kristin K'eit—Bureau of Indian Affairs
4. Daniel Sharp—Bureau of Land Management
5. Dave Mills—National Park Service (part of meeting)
6. Sandy Rabinowitch— National Park Service (other part of meeting)

Federal Staff

1. Steve Kessler—U.S. Forest Service, Facilitator, Federal representative to help report out to the Southcentral Regional Advisory Council
2. Cal Casipit—U.S. Forest Service
3. Tim Joyce—U.S. Forest Service
4. Ruth D'Amico—U.S. Forest Service
5. Milo Burcham—U.S. Forest Service, Note taker
6. Jeremy Karchut—U.S. Forest Service
7. Jerry Berg—U.S. Fish and Wildlife Service
8. Andy Loranger—U.S. Fish and Wildlife Service
9. K.J. Mushovic—U.S. Fish and Wildlife Service, Southcentral Alaska Subsistence Regional Advisory Council (RAC) Coordinator
10. Sandy Rabinowitch—National Park Service
11. Barbara Cellarius—National Park Service
12. Jean Gamache—National Park Service
13. Dan Sharp—Bureau of Land Management

Following is a summary of consultation issues discussed and input received. The proposals have been placed in numeric order, although they were not discussed in that order.

Ninilchik Traditional Council (NTC) – Greg Encelewski and Ivan Encelewski

Current Proposals

1. WP12-22 – We support WP12-22. WP 12-22 was NTC's proposal. NTC was made aware of the recommendation for WP12-22 from the Kodiak/Aleutian RAC which is to reject the proposal.
2. WP12-30/31 – We oppose WP12-30/31; we have concerns about bull:cow ratios. However, this proposal would leave very little opportunity to harvest moose, would be a hardship on the community, and is unnecessary. Many spike/fork bull moose have been seen in the field; we believe that numerous bears, wolves and road kills are a problem. Harvesting only large bulls is not a good management strategy. Subsistence hunters from Ninilchik take approximately 6 moose per year from Unit 15. That level of harvest has little impact on the moose population. We would like to see federal subsistence hunters be allowed to harvest spike/fork bull moose. The assumption that more rural residents would hunt under federal regulations because of the changes to State regulation, and therefore harvest more moose, is incorrect. If there is a conservation concern it may be better to close the season altogether. Federal lands are a long distance away from the community of Ninilchik making it difficult to access, especially for elders.
3. WSA11-03 (Special Action) – We oppose WSA11-03 for the reasons discussed under WP12-30/31. Currently delegated in-season management authority could be used to prevent too many bull moose from being harvested as is done in fisheries management. We worry that these proposed short-term actions, adopted as long term actions (WP12-30/31), will not be taken out of regulation in the future.

Other topics

WSA11-02 -- It was improper for WSA11-02 (Special Action) to pass without tribal consultation and without support of the Regional Advisory Council (RAC). We were not allowed to comment on the special action request. A member attended the board meeting but was not allowed to testify. We felt it was a step backwards in the process. We are grateful for the opportunity to comment on WSA11-03.

NTC would like the opportunity to work with managers to develop a long-term strategy for managing moose population on the Kenai.

Facilitator Steve Kessler informed participants about the opportunity for tribes and corporations to consult with the Federal Subsistence Board regarding long term consultation protocols for the Federal Subsistence Program. The opportunity to do this for ANCSA corporations, for government-to-corporation consultation, will be during the AFN Convention in Anchorage at the Egan Center on the afternoon of Thursday October 20th. The in-person opportunity to comment on the development of the Tribal Consultation Protocol, for government-to-government consultation, will be during the BIA Tribal Service Providers Conference on December 1st from 1 p.m. to 5 p.m. at the Dena'ina Convention Center in Anchorage.

Greg Encelewski and Steve Kessler will present the notes from this discussion to the Southcentral RAC in Cantwell next week, after Greg and Ivan have a chance to review them for content. A written copy will be presented to the Federal Subsistence Board. All Southcentral tribal representatives can also testify in-person at the RAC and Board meetings.

2011 Federal Subsistence Harvest (reported through 9/30/2011)

Federal Subsistence Harvest Reported through September 30, 2011

	Cooper Landing Residents			Hope Residents			Ninilchik Residents			
Subsistence Fishery	Sockeye	Coho	Chinook	Sockeye	Coho	Chinook	Sockeye	Coho	Chinook	Totals
Dip Net Fisheries										
Russian River Falls	712	N/A	N/A	159	N/A	N/A	0	N/A	N/A	871
Kenai River below Mile 48	0	0	0	0	0	0	0	0	0	0
Moose Range Meadows	0	0	0	0	0	0	0	0	0	0
Kasilof River	N/A	N/A	N/A	N/A	N/A	N/A	1	0	0	1
Rod and Reel Fisheries										
Upper Kenai/Russian River	43	0	N/A	0	0	N/A	0	0	N/A	43
Moose Range Meadows	6	0	0	0	0	0	66	0	0	72
Kasilof River	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0	0
Totals	755	0	0	159	0	0	67	0	0	987

Note: Rod and reel harvest numbers reported to date are likely conservative since there is no requirement for in-season reporting.

2007-2011 Federal Subsistence Sockeye Salmon Harvest

Subsistence Fishery	Year 2007	2008	2009	2010	2011	Totals	
Dip Net Fisheries							
Russian River Falls	527	1281	809	804	871	4292	78.2%
Kenai River below Mile 48	0	0	30	0	0	30	0.5%
Moose Range Meadows	12	0	0	0	0	12	0.2%
Kasilof River	30	108	7	40	1	186	3.4%
Rod and Reel Fisheries							
Upper Kenai/Russian River	169	125	165	57	43	559	10.2%
Moose Range Meadows	4	202	93	42	72	413	7.5%
Kasilof River	0	0	0	0	0	0	0.0%
Totals	742	1716	1104	943	987	5492	

United States Department of the Interior

NATIONAL PARK SERVICE

Wrangell-St. Elias National Park & Preserve
Mile 106.8 Richardson Hwy. P.O. Box 439
Copper Center, AK 99573-0439
907 822 5234 Fax 907 822 7216

Wrangell-St. Elias National Park/Preserve
Fall 2011 Fisheries Report
Molly McCormick, Fisheries Biologist

TANADA CREEK WEIR

The Tanada Creek weir is located in the northern part of Wrangell-St. Elias National Park, 2 miles off the Nabesna Road just downstream of Batzulnetas, Katie John's fish camp. In 2011 the Tanada Creek weir was installed on May 24. The first fish passed through the weir on June 17. A total of 8,969 sockeye and 1 Chinook were counted through the weir this season. We have been using an underwater video camera and recording system at the TC weir since 2007. This has greatly improved the accuracy and efficiency of the salmon estimates at the weir and allows for continuous fish passage. There were several days of high water at the TC weir this season and a few of low water but the fish count at the weir was not compromised.

The Tanada Creek weir with video camera set up

Low water in Tanada Creek, 2011

Otolith collection from carcasses for age sampling at Tanada Lake

Year	Number of sockeye	Number of Chinook
1998	28,992	2
1999	—	—
2000	—	—
2001	1,649	16
2002	6,186[1]	5
2003	5,856	2
2004	17,120	0
2005	4,659[2]	1
2006	4,513	4
2007	11,103	7
2008	2,850[3]	137
2009	38,208	9
2010	5,226	16
2011	**8,969**	**1**

Number of sockeye and Chinook counted through the Tanada Creek weir, 1998-2011

[1]Estimate based upon mark-recapture sampling; the actual weir estimate was 2,489

[2]Weir compromised by flooding, estimate from video count; the actual weir estimate was 739

[3]Weir was in operation from May 28 until July 8 when flooding occurred that disabled it.

1998[1]	7/13
2001	6/14
2002[2]	6/28
2003	6/11
2004	6/11
2005	6/13
2006	6/17
2007	6/20
2008	6/10
2009	6/5
2010	6/17
2011	6/17

Date of 1st fish counted through the Tanada Creek weir, 1998-2011

[1]The creek was dry due to a drought.

[2]In 2002 the weir was not operational until June 27.

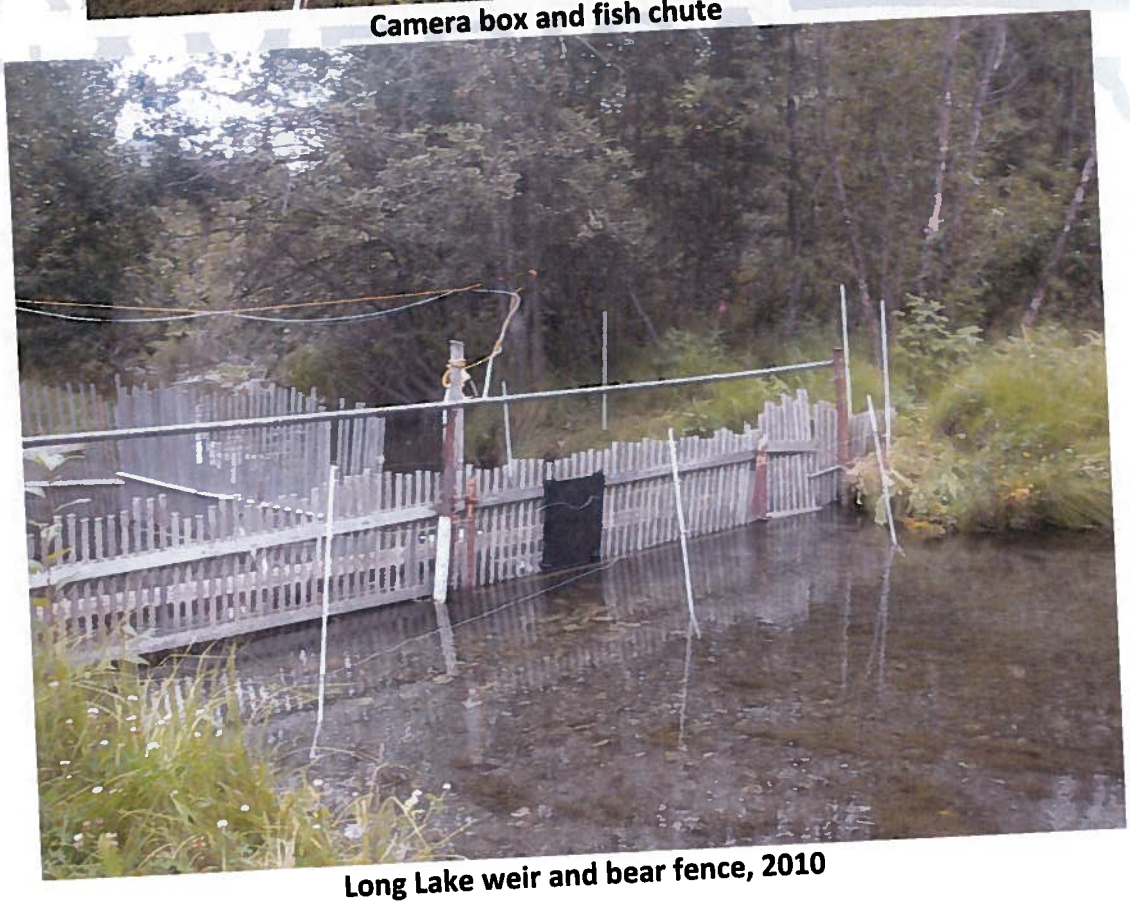
LONG LAKE WEIR

The Long Lake weir is located at mile 45 on the McCarthy Road and is in the Chitina River drainage. This weir was originally operated by ADFG in the mid 70s. When they were not able to fund it in 1976, the local landowner, Cliff Collins took over the operation and continued running it until 2003 when, at the age of 93, he asked for help from WRST in continuing data collection at the weir. Since then crew for the daily operations has been provided by the Collins family and the Park.

Cliff Collins with Karelian bear dog at weir in 2003 at age 93.

In 2010 an underwater camera and video recording system similar to the one at Tanada Creek was installed at this weir for the first time. The electrical system operates on solar power with a generator back-up and is working well. This has made the weir operations more accurate and efficient and also allows for continuous fish passage throughout the day and night.

Camera box and fish chute



Long Lake weir and bear fence, 2010

In 2011 the weir was operational by August 2. The first fish migrated through the weir on August 9. The weir is still in operation and, as of September 29, 12,761 sockeye and 872 coho salmon had migrated through. The sockeye run is over and this weir is removed around the end of October.

Year	# Sockeye	Year	# Sockeye	Year	# Sockeye	Year	# Sockeye
1974	4,501	**1984**	10,729	**1994**	18,289	**2004**	19,215
1975	6,786	**1985**	21,431	**1995**	17,933	**2005**	7,770
1976	24,689	**1986**	16,947	**1996**	6,209	**2006**	9,239
1977	8,772	**1987**	13,323	**1997**	4,433	**2007**	7,846
1978	15,458	**1988**	7,065	**1998**	8,531	**2008**	567
1979	46,110	**1989**	17,760	**1999**	12,922	**2009**	4,555
1980	38,978	**1990**	21,399	**2000**	8,665	**2010**	10,876
1981	12,687	**1991**	11,501	**2001**	26,939		
1985	28,064	**1992**	10,141	**2002**	50,000		
1983	28,003	**1993**	16,101	**2003**	4,604		

Number of sockeye counted at the Long Lake weir, 1974-2010

TAKE PRIDE® IN AMERICA

MILES LAKE SONAR

The Miles Lake sonar, operated by ADFG, is located just downstream of the Million Dollar Bridge at mile 48 of the Copper River Highway out of Cordova, Alaska. In 2011 914,285 fish passed by the sonar.

Year	Total Salmon	Year	Total Salmon	Year	Total Salmon	Year	Total Salmon
1978	107,011	1987	483,478	1996	906,867	2005	854,268
1979	237,173	1988	488,398	1997	1,148,079	2006	959,731
1980	276,538	1989	607,797	1998	866,957	2007	926,438
1981	535,263	1990	581,859	1999	848,921	2008	717,799
1982	467,306	1991	579,435	2000	587,592	2009	709,330
1983	545,724	1992	601,952	2001	833,569	2010	924,010
1984	536,806	1993	833,387	2002	816,825	**2011**	**914,285**
1985	436,313	1994	715,577	2003	695,233		
1986	507,477	1995	599,215	2004	669,646		

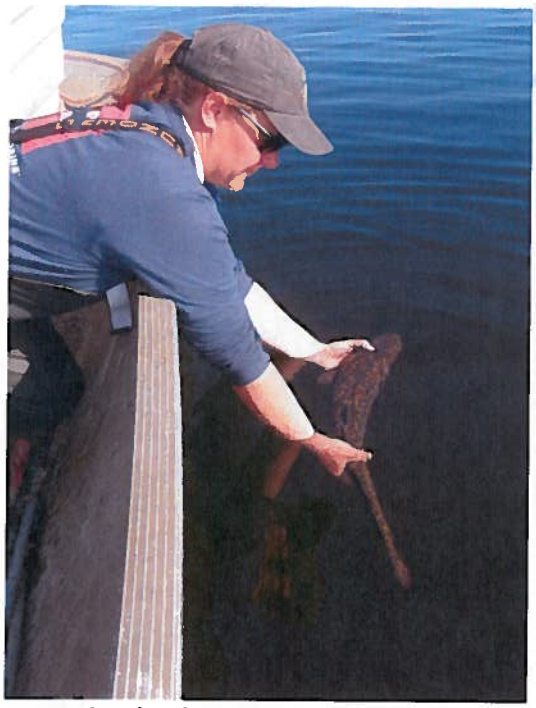
Miles Lake sonar count of salmon migrating up the Copper River, 1978-2011 (ADF&G website)

TANADA-COPPER LAKE BURBOT LIFE HISTORY PROJECT

A 3 year burbot project at Copper and Tanada Lakes was started in 2009. Its objectives are to look at the vertical movement of the burbot and the temperature ranges they inhabit. Archival tags were surgically implanted in 70 burbot in Tanada Lake in 2009. These tags record depth and internal temperatures. In

2010 70 burbot in Copper Lake were tagged and two recapture events took place in Tanada Lake. Fifteen archival tags were retrieved from Tanada Lake. In 2011 the crew finalized the project's field work in Copper Lake in September. Nine archival tags were recaptured during this event. This project also includes gathering data for bathymetric mapping of both lakes.

Archival tag



Returning burbot to lake after surgery

Measuring tagged fish

Hoop trap with burbot

BURBOT ABUNDANCE IN SHEEP AND GRIZZLY LAKES

Sheep Lake and Grizzly in WRST, lakes that are possible targets for subsistence ice fishing, were sampled for burbot abundance this summer. Burbot were captured and tagged in both lakes in July; a recapture event took place in both lakes in September with the following results:

Grizzly Lake

- 301 burbot were initially tagged in July
- 13.2% or 25 tagged burbot were recaptured in September

Sheep Lake

- 102 burbot were initially tagged in July
- 34.5% or 29 tagged burbot were recaptured in September

Further analysis of this data will take place this winter.

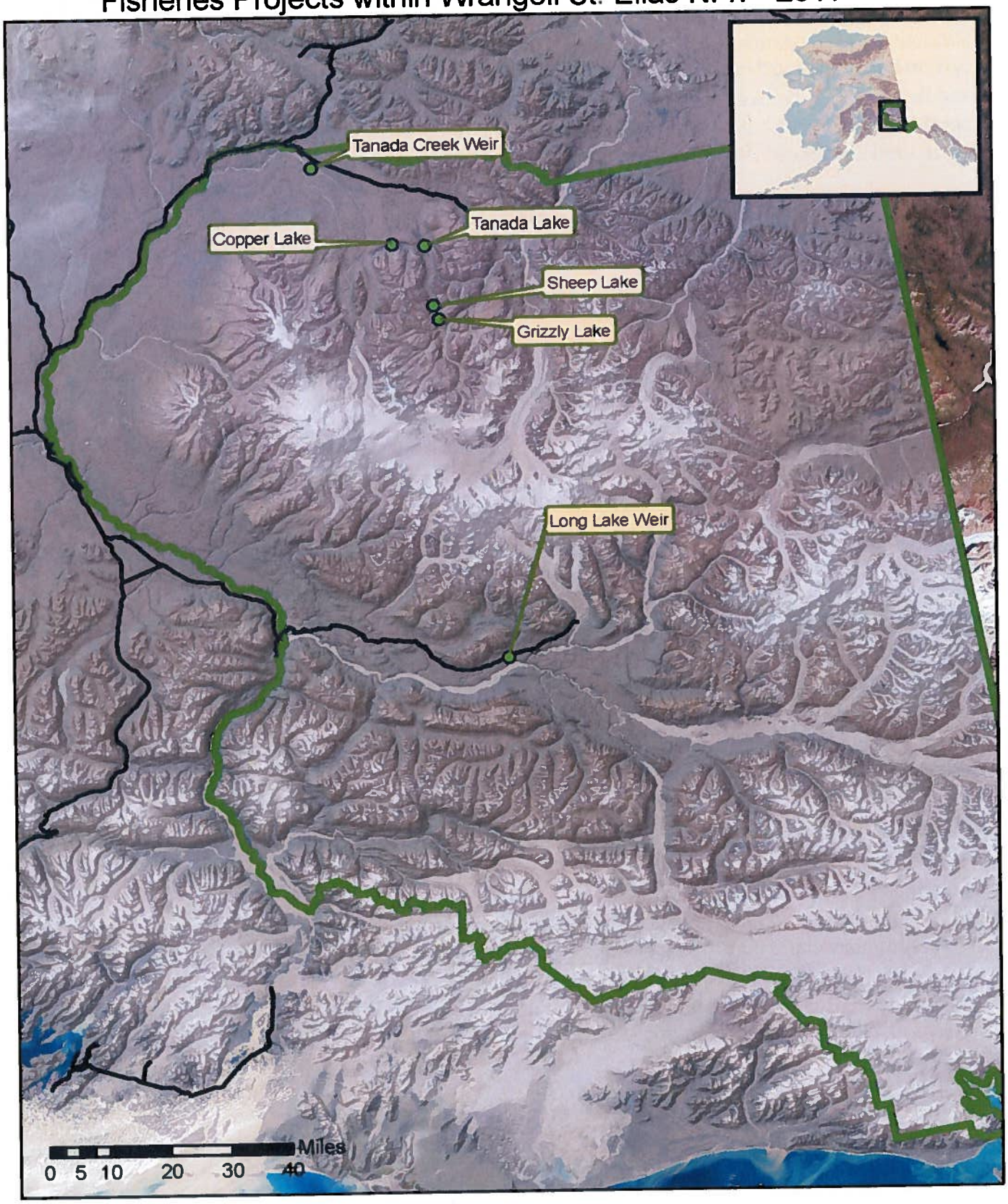
Releasing tagged burbot at Grizzly Lake, July

Buoys and hoop traps at Grizzly Lake in July

Burbot captured at Sheep Lake in July

Burbot with Arctic grayling in mouth, Sheep Lake in September

Fisheries Projects within Wrangell St. Elias NP/P 2011



Subsistence Permits Issued

We issue federal subsistence fishing permits at four locations in the Park and at Tetlin National Wildlife Refuge in Tok. In 2011 we changed over to a new online permitting system connected to the Office of Subsistence Management (OSM), a division of the United States Fish & Wildlife Service (USFWS). This system looks like it will work very well for us. The changeover took place in the middle of the summer and there has not been enough time to catch up on the data entry. Current figures for the number of permits issued in 2011 should be available by the middle of October. Permits are not due back to our office until October 31. Completed harvest data will be available in January 2012.

	Glennallen Subdistrict	Chitina Subdistrict	Batzulnetas area
2002	201	122	1
2003	221	100	1
2004	262	109	1
2005	267	76	1
2006	254	76	0
2007	281	98	1
2008	270	82	1
2009	274	68	0
2010	269	92	3

Special Actions

Four Special Actions were issued by acting Superintendent Lynn at WRST this summer in order to align the federal Chitina subdistrict subsistence fishery closures with state Chitina subdistrict personal use fishery closures.

OSM Funding

Both the Tanada Creek and Long Lake weirs are operating on funds provided by USFWS, the Fisheries Resource Monitoring Program.

Currently Funded Fisheries Research Projects at WRST, 2012 Field Season

Two ongoing projects will continue in 2012:

1. Abundance and Run Timing of Adult Salmon in Tanada Creek (the Tanada Creek weir)
2. Abundance and Run Timing of Adult Salmon in Long Lake Creek (the Long Lake weir)

We also have funding to further investigate the presence/absence of longfin smelt within the freshwater systems of WRST and will be sampling in the Yakutat area in late October.

United States Department of the Interior
NATIONAL PARK SERVICE

Wrangell-St. Elias National Park & Preserve
Mile 106.8 Richardson Hwy. P.O. Box 439
Copper Center, AK 99573-0439
907 822 5234 Fax 907 822 7216

October 2011 Wildlife Report

Judy Putera, Wildlife Biologist, 907-822-7241

Chisana Caribou Herd – Public meetings were held in Slana and Tok to allow comment on the Chisana Caribou Herd Management Plan. Written comments were also solicited through public announcements. Comments were considered by the working group and incorporated into the management plan where appropriate. A final plan is expected to be signed by the cooperating agencies this fall. A population census for the Chisana caribou herd was completed October 11, 14-15, 2010. A composition count will be completed in October 2011.

Table 1. Population estimates and composition count data for the Chisana Caribou Herd during 2003-2010.

Dates	Population Estimate	90% Confidence Interval	Calves: 100 Cows	Bulls: 100 Cows
10/19-20/2003	720	606 – 833	25	37
10/15-16/2005	706	646 – 792	23	46
10/12/06	-	-	21	48
10/13-14/2007	766	719 – 823	13	50
10/9/2008	-	-	21	44
10/6-9/2009	-	-	15	48
10/11-15/ 2010	696	651 – 743	23	42

Mentasta Caribou Herd- A June census and fall composition count was conducted in 2010 to determine a herd population estimate. Population estimates have been revised and are based on an estimate of 30 bulls per 100 cows in the fall (Table 2). Previous estimates likely incorporated Nelchina caribou bulls which are present within the Mentasta herd range in early fall.

Table 2. Mentasta caribou herd population estimates and fall cow:calf ratios, 2008-2010.

Year	Population Estimate	Fall Calves:100 Cows
2008	319	20
2009	421	10
2010	336	25

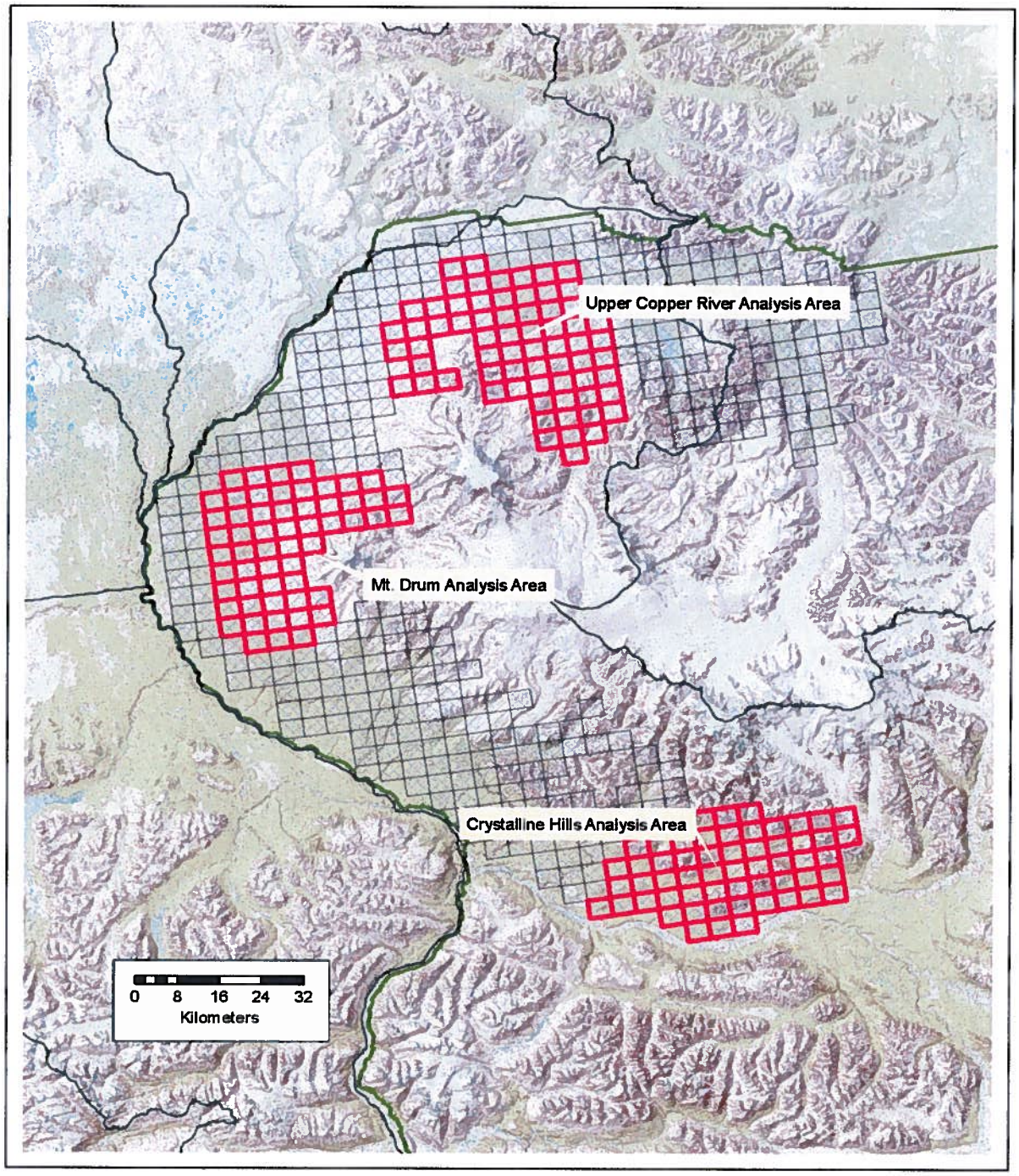
Moose

We estimated the number of moose for an 8210 km² (3170 mi²) area in Wrangell-St. Elias National Park and Preserve (Figure 1) during six days of surveys between 17-21 November, 2010 (Table 3). During the surveys, we counted and classified 623 moose. Using geospatial sampling and analysis, we estimated the population at 1593 ± 225 moose (90% C.I.), with a density of 0.5 moose/mi^2. The calf:bull:cow ratio was estimated at 17:50:100.

Table 3. Results of the Geospatial Moose Population Estimate for 2007 and 2010.

Area	Year	Population Estimate	Moose Observed	Calf: 100 Cow	Bull: 100 Cow	No. Units Surveyed	Density (mi²)
Total Survey 3170 mi²	2007	1576 ± 244	500	19	52	87	0.50
	2010	**1593 ± 225**	**623**	**17**	**50**	**94**	**0.50**
Upper Copper 524 mi²	2007	403 ± 70	170	16	38	25	0.77
	2010	**539 ± 106**	**220**	**14**	**49**	**19**	**1.03**
Mt. Drum 349 mi²	2007	232 ± 65	82	11	118	8	0.66
	2010	**176 ± 51**	**66**	**31**	**56**	**10**	**0.50**
Crystalline Hills 349 mi²	2007	260 ± 93	63	29	42	9	0.74
	2010	**259 ± 59**	**134**	**17**	**49**	**16**	**0.74**

Figure 1. Moose survey area and analysis areas within the count area. These areas were selected to allow comparisons with historical survey areas.

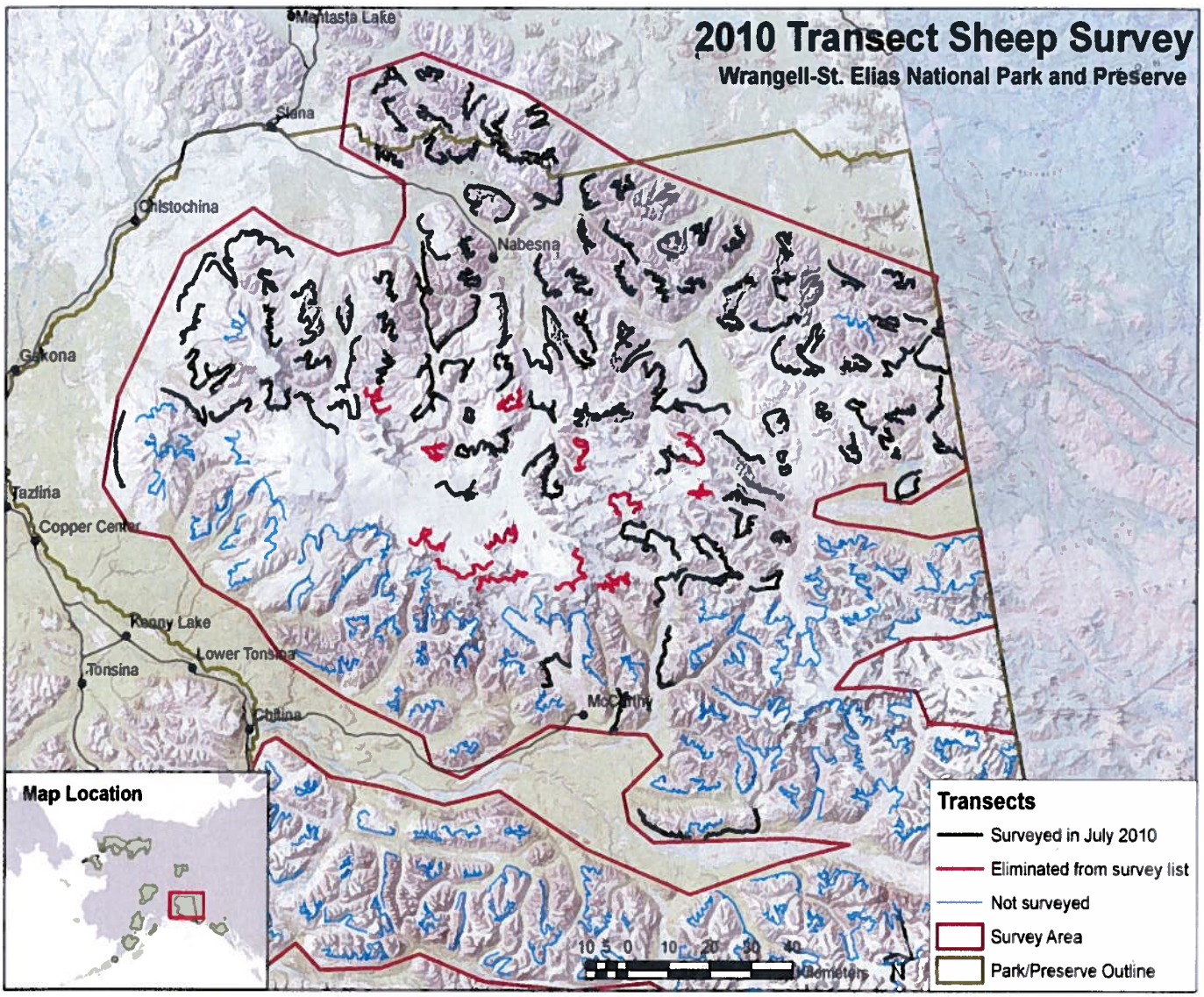


Nabesna Moose Project- Wrangell-St. Elias National Park & Preserve and ADFG will begin a cooperative project in October 2011 to radiocollar 11 bull and 11 cow moose in the Nabesna Road area of GMU 11 and 12. An intensive moose population census using the method above will be conducted in November 2011. This project will give us information on moose movements and habitat use in the area and an accurate population estimate that can guide moose regulatory changes in the area.

Dall's Sheep

A parkwide Dall's sheep population census was initiated in July 2010 and completed in July 2011. The census uses a transect technique to estimate the total number of sheep within the park and preserve (Figure 2). Results should be available in 2012.

Figure 2. Transects to be surveyed for the Dall's sheep population census. Black transects were completed in 2010 and blue transects completed in 2011.



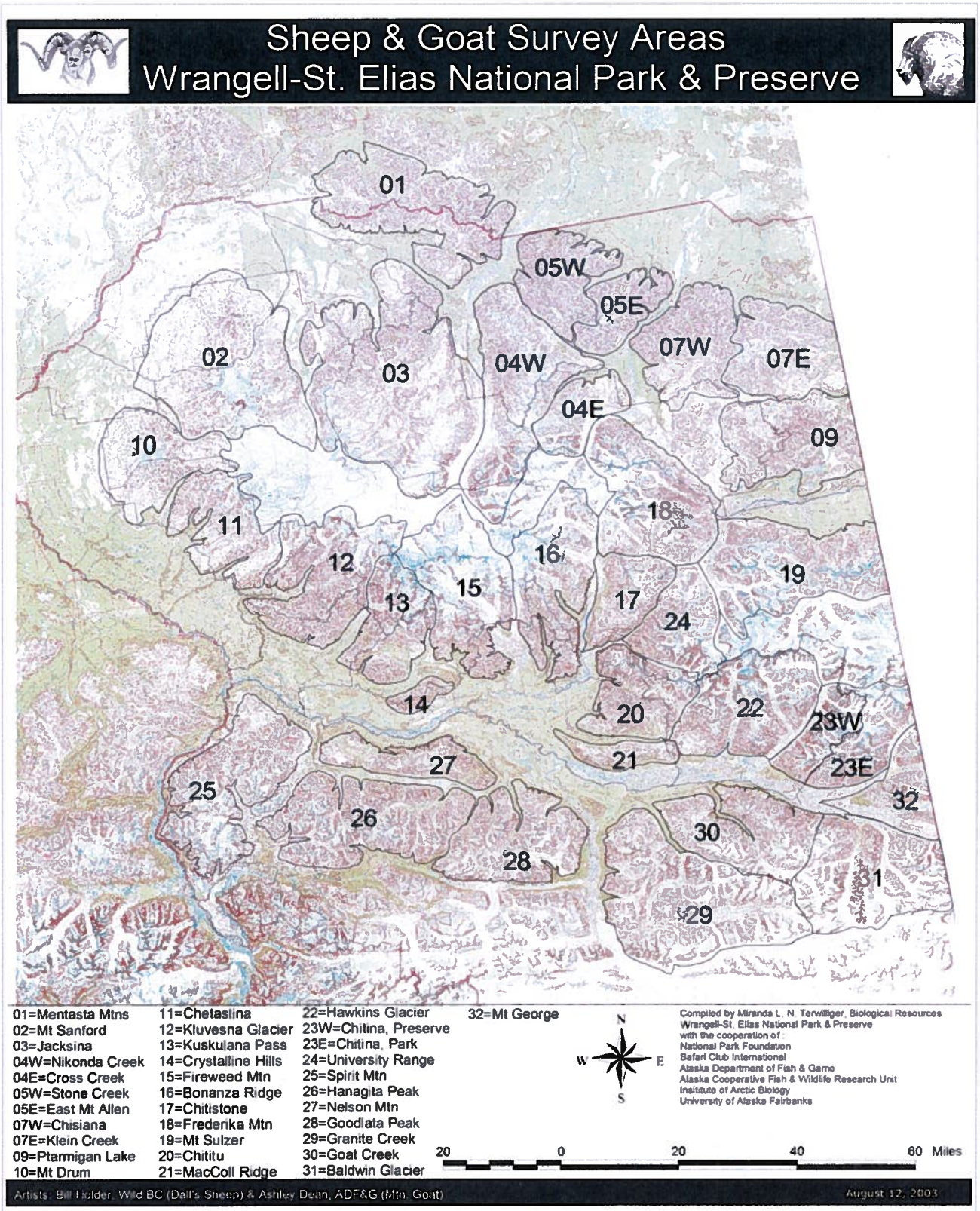
Wrangell-St. Elias National Park & Preserve and ADFG completed sheep surveys in a number of survey units (Figure 3) in GMU 12 during 2011 (Table 4).

Table 4. Unit 12 Dall sheep aerial composition counts within the Wrangell–St Elias National Park and Preserve, 1981, 2001, 2002, 2005, 2006, 2007, and 2011

	Year	Legal rams[a]	Sublegal rams[b]	Unclassified rams	Total rams	Ewes[c]	Lambs	Unidentified	Total sheep	Legal rams:100 ewes	Sublegal rams:100 ewes	Total rams:100 ewes	Lambs:100 ewes	Lambs % of total
Count Area 4E	2006	7	24	0	31	65	25	0	121	11	37	48	38	21
	2011	7	42	0	49	72	29	0	150	10	58	68	40	19
Count Area 5E	1981	84	243	0	327	698	234	0	1259	12	35	47	34	19
	2001	54	207	0	261	516	90	0	867	11	40	51	17	10
	2011	14	58	0	72	142	35	0	249	10	41	51	25	14
Count Area 7W	1981	15	210	21	246	511	140	51	948	3	41	48	27	15
	2001	25	88	0	113	153	33	0	299	16	58	74	22	11
	2002	58	191	0	249	426	129	0	804	14	45	59	30	16
	2005	26	100	0	126	260	63	0	449	10	38	48	24	14
	2011	15	91	0	103	235	59	0	397	6	39	44	25	15
Count Area 7E	2007	14	87	1	102	248	62	0	412	6	35	41	25	15
	2011	9	81	0	90	193	63	0	346	5	42	47	33	18
Count Area 9	1981	9	110	136	255	682	249	0	1186	1	16	37	37	21
	2002	40	194	0	234	358	125	18	735	11	54	65	35	17
	2005	30	179	5	214	436	107	0	757	7	41	49	25	14
	2011	20	126	0	146	338	114	0	598	6	37	43	34	19

[a] Full curl or larger.
[b] Greater than ¼ curl but less than full curl.
[c] Ewe classification also includes yearlings of both sexes and rams of ¼ curl or less.
[d] Count Area 7 only included from Snag Creek East.

Figure 3. Sheep survey units in Wrangell- St. Elias National Park & Preserve.



Denali National Park and Preserve
Alaska

National Park Service
U.S. Department of the Interior

Denali Park Road

Draft Vehicle Management Plan and Environmental Impact Statement

HOW TO COMMENT ON THIS PLAN

If you wish to comment on this vehicle management plan / environmental impact statement, you may do so online at the NPS planning website at http://parkplanning.nps.gov/dena or you may mail comments to the address below. This document will be available for public review for 60 days, ending on September 30, 2011.

Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you may ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Please address written comments to
Denali Park Planning
Denali National Park and Preserve
P.O. Box 9
Denali Park, Alaska 99755
DENA_planning@nps.gov

EXECUTIVE SUMMARY

PURPOSE OF ACTION

The purpose of the proposed National Park Service action is to improve the management of vehicles along the 92-mile-long Denali Park Road. The goal of the plan is to provide a high quality experience for visitors; protect wilderness resources and values, scenic values, wildlife, and other park resources; and maintain the unique character of the Park Road. The alternatives consider the Park Road's user capacity (the maximum number of vehicles that can be accommodated on the road during the peak visitation period of May through September). The plan provides a means to assess the effectiveness of the transportation system in protecting park resources and providing for visitor access and enjoyment.

NEED FOR ACTION

The current approach for managing vehicles on the Park Road is based on the park's 1986 general management plan, as amended, which established an allowable seasonal limit of 10,512 vehicles on the Park Road past Mile 15 from approximately Memorial Day to a week after Labor Day. While the overarching goal of the limit was to protect opportunities for viewing scenic landscapes and wildlife health and habitat, the limit was not connected to more refined desired conditions in a logical framework that could be measured and monitored over time.

Although the vehicle limit is clearly measureable, it is less clear that a numerical limit alone is enough to adequately protect park resources and provide visitors with freedom of movement along the Park Road. Other factors come into play as indicated by a multidisciplinary road study that began in 2006 to expand understanding of the impacts of traffic volume and traffic patterns on the park's physical, biological, and social environment. These factors include visitor perceptions of crowding at wildlife stops and rest stops; interactions between buses and wildlife; and the patterns of wildlife movements along the Park Road corridor. In addition, there is a growing demand for the Park Road experience and trends indicate that visitation to Alaska and the Denali area will continue to increase.

As a result, this plan is needed to set measurable indicators and standards that will ensure key park resources and values along the Park Road are adequately protected in accordance with desired conditions, especially in light of the potential for increased visitation. These resources and values include (1) wildlife populations, habitat, and the processes and components of the park's natural ecosystem, (2) wilderness character and values, and wilderness recreational opportunities, (3) the scenic and geologic values of Mount McKinley and the surrounding mountain landscape, (4) visitor enjoyment, and (5) the inspiration visitors derive from the park's natural features and opportunities to observe wildlife in their natural habitat. Additionally, an adaptive management approach which employs more sophisticated science, modeling, and monitoring techniques to effectively protect resources and provide high quality visitor experiences is needed to allow park managers the flexibility to adjust operations in response to observed resource protection or visitor use issues.

PLANNING GOALS AND OBJECTIVES

The goals provide descriptions of what will be achieved, while the objectives list more specific outcomes of the goals.

Goal 1: Protect the exceptional condition of the park's resources and values through informed, proactive, and transparent management.

Objectives:

- Manage the transportation system to ensure protection of wildlife populations, wildlife habitat, and the processes and components of the park's natural ecosystem.
- Manage the transportation system to ensure protection of wilderness character, wilderness resource values, and wilderness recreational opportunities.
- Continue to protect and promote the historic character of the Park Road and related elements of the cultural landscape.
- Share monitoring findings with the public and inform them of management actions regarding the transportation system.

Goal 2: Provide high-quality and appropriate visitor opportunities on the bus.

Objectives:

- Ensure a transportation system that provides the park's interpretive themes and messages to all visitors as a means to encourage public understanding and support of park resources and values.
- Ensure a transportation system that provides a high-quality opportunity for viewing scenic landscapes and wildlife.
- Provide a bus environment that enables visitors to engage with the park resources and values in a meaningful way.

Goal 3: Provide access to recreational and educational opportunities along the Park Road.

Objectives:

- Provide freedom of movement.
- Provide a system that is universally accessible and able to accommodate visitor needs and equipment.

Goal 4: Make the park transit/access system understandable and user friendly.

Objectives:

- Clearly communicate information about the system through a variety of means.
- Enable visitors to easily choose the experience that meets their needs within the limits of the system.
- Ensure the transportation system enables visitors to spend time at an NPS visitor center.

Goal 5: Provide a transportation system that meets visitor access needs.

Objectives:

- Optimize seating capacity within the system design.
- Maximize system flexibility to meet future visitor demand, while sustaining desired resource conditions and visitor experiences.
- Provide stability and predictability in the system.
- Develop a system that is affordable and offers opportunities for the full range of park visitors.

Goal 6: Provide access for subsistence use and inholders.

Objectives:

- Provide legally required access to Kantishna inholdings.
- Provide legally required access to subsistence users

ALTERNATIVES

The alternatives under consideration include a required "no-action" alternative (alternative A, which is a continuation of current management) and two action alternatives (alternatives B and C), which were developed by an interdisciplinary planning team with feedback from the public

and other experts during the planning process. The alternatives are briefly described below, and include a number of actions that would be common to all alternatives, as well as those common to just alternatives B and C.

An important element common to both alternatives B and C is that vehicle use on the Park Road would be adaptively managed to achieve specific desired conditions. Through the use of indicators and standards, the current visitor experience and resource condition would be maintained or improved. For the restricted section of the Park Road (Savage River to Wonder Lake), the following indicators would be monitored annually:

- sheep gap spacing
- night time traffic levels
- large vehicles
- vehicles at a wildlife stop
- vehicles in a viewscape
- wait time for hiker
- vehicles at rest areas and eielson visitor center

Additionally, comprehensive monitoring and data collection would take place every 1-5 years for the following to detect any impacts attributable to changes made to the transportation system.

- natural resource condition
- visitor satisfaction

The maximum annual and daily vehicle capacity for the Park Road will be published each year as part of the Superintendent's Compendium, subject to public notice and comment. This will allow the Superintendent to set the next year's capacity based on monitoring, research, and lessons learned in the prior years' implementation. The National Park Service would initiate the necessary steps to promulgate a modification of CFR 13.932 - 13.934 that would give the Superintendent discretion to set the maximum capacity of the road to maintain the vehicle management system indicators and standards.

Alternative A: No Action (Continuation of Current Management)

Alternative A represents the existing condition. Vehicle use on the restricted section of the Park Road would continue to be managed through a seasonal limit of 10,512 vehicles; this limit was set in the 1986 general management plan and then formalized in regulations in 2000. The regulated season begins on the Saturday of Memorial Day weekend and continues through the second Thursday following Labor Day, or September 15, whichever comes first. Allocation for segments of the transportation system and other vehicle use were modified in the 1997 *Entrance Area and Road Corridor Development Concept Plan* and the *Park Superintendent's Compendium.*

A check station where staff count visitors and vehicles was established on the road at the Savage River in the 1970s.

Resource monitoring and visitor surveys would continue to be conducted to address areas of concern but are not part of a formal adaptive management approach to maintain or improve resource condition and visitor experience along the Park Road.

Management zones along the Park Road would remain as described in the 1997 *Entrance Area and Road Corridor Development Concept Plan.* The current management zoning could allow for an increase from the current condition in vehicle use west of Eielson to Wonder Lake.

Alternative B (Optimizing Access)

This alternative would promote maximized seating on all transit and tour vehicles to offer the largest number of visitors the opportunity to travel the Park Road. Visitors would have access to a highly structured transportation system that offers

predictability, efficiency, and greater opportunity to have a park experience of choice, while meeting set standards for natural resource protection and visitor experience.

To fully optimize the transportation system, a majority of seats on both transit and tour buses would be filled by pre-booking visitors (independent and organized groups). This would allow managers to predict daily vehicle needs and maximize the flexibility of the system to accommodate visitor demand.

Management zones along the Park Road would remain as described in the 1997 *Entrance Area and Road Corridor Development Concept Plan*. This may allow for future growth in vehicle use west of Eielson to Wonder Lake.

Alternative C (Maximizing Visitor Opportunities)

This alternative would promote a variety of visitor opportunities that range from brief experiences in the park's entrance area, to short and long visits along segments of the Park Road, to multiday experiences in the park's backcountry. Visitors would have opportunities for spontaneity and freedom during their park visit, while set standards for resource condition and visitor experience are met.

The transportation system in this alternative would separate tour and transit functions by developing a self-guided economy tour. Distinguishing the economy tour experience from transit offers benefits to both user groups. Dedicated transit services would provide more seating for eastbound hikers, increasing visitors' freedom of movement. A dedicated economy tour service would provide visitors with a modest tour experience.

To further preserve wilderness resource values and contemplative visitor experiences, a new management subzone on the Park Road would be created west of Eielson Visitor Center to Wonder Lake (Wildlife Viewing Subzone 3). This section would be managed for the lowest traffic volume on the Park Road and not allow significant growth beyond the current condition.

ENVIRONMENTAL CONSEQUENCES

The environmental consequences of the actions in each alternative were analyzed. This analysis evaluated the magnitude of impacts and how these impacts compare to current conditions. The cumulative impact assessment outlines overall impacts resulting from past, current, proposed, and reasonably foreseeable management and other actions. The analysis is intended to guide the decision maker in choosing a management action based on an objective understanding of environmental consequences.

The National Park Service considered six impact topics for detailed analysis, including

- visitor use and experience,
- the transportation system and traffic,
- wildlife and wildlife habitat,
- wilderness,
- park management and operations, and
- socioeconomics.

United States Department of the Interior

NATIONAL PARK SERVICE
Denali National Park & Preserve
Mile 237 Parks Highway
P.O. Box 9
Denali Park, AK 99755

SELECTED WILDLIFE UPDATE 2010-2011

Wolves

In April 2011, there were approximately 71 wolves in the 10 packs being monitored by park biologists. The estimated density of wolves in Denali (about 3.94 wolves per 1000 square kilometers) was slightly higher than last year's estimate of 3.46 wolves per 1000 square kilometers.

We used a helicopter to capture 19 wolves in Winter 2010-2011. There were at that time two large gaps in our distribution of collared wolves, one in the Stampede corridor from Healy to the Kantishna Hills, and the other in the west end of the park, centered on the lower McKinley River. We saw little or no sign of wolves in those areas during our capture work. The most surprising thing we noticed was that we saw 13 coyotes from the helicopter over the course of 5 days of flying in the park in November and December. The coyotes were mostly alone, and were seen all the way from the Nenana River to the Foraker River.

As of August 8, 2011, we have 11 conventional and 14 GPS collars on 9 wolf packs in and around the park. Most of the GPS collars determine the animal's location once per day, store the data, and upload it through the ARGOS satellite system. Six GPS collars that were put out as part of a special study determine the animal's location six times per day. Those collars are programmed to detach from the wolves in September 2012. Three GPS-collared wolves have dispersed away from their packs and are living in the North Fork of the Kuskokwim, the South Fork of the Kuskokwim, and the upper Susitna River areas.

At the March 2010 meeting of the Alaska Board of Game, the board voted to eliminate the Stampede and Nenana Canyon Closed Areas, which had been in place for 10 years to protect wolves that live near the Denali Park Road from being hunted or trapped when they leave the park. The National Park Service had submitted a proposal to enlarge the Stampede Closed Area to include all of the "wolf townships" that form a notch in the park boundary. Denali Park Road Study employee Bridget Borg is starting a Master's program at the University of Alaska, Fairbanks, studying wildlife viewing along the park road and potential effects of state and federal management decisions on wildlife viewing opportunities.

Herd size. For late September 2010, Layne Adams derived a preliminary herd size estimate of 2,070 caribou. That number will likely change slightly depending on results of the 2011 census. The Denali Herd has been relatively stable over the last 7 years, corresponding with higher recruitment averaging 22 calves:100 cows during this period (Table 1), a 70% increase over the previous 14-years of markedly poor recruitment. Although herd size has increased slowly since 1998 by 1.5%/year, that increase is largely attributed to the increased number of calves in the population (mean = 144 and 289 calves during 1998-2003 and 2004-10, respectively), with little change in adult female numbers (0.5%/year). Increases in adult male numbers (1.5%/year) are similar to the population as a whole.

Calf Production And Survival. Productivity of cows ≥ 1 year old was estimated at 74% in mid-May 2010, based on 66 radiocollared females in the age-structured sample (Table 2), or near the 24-year average of 78%. Of the 17 non-parturient females in the sample, 14 were ≤ 2 years-old (8 yearlings, 6 2-year-olds). The remaining 3 females that did not produce calves were 3, 5, and 8 years-of-age. Interestingly, all 6 cows in the sample that were ≥ 15 years old produced calves.

During the early-June 2010 postcalving composition survey, researcgers noted 30 calves:100 cows. By the late September composition count, the calf:cow ratios had declined to 20:100 (Table 1, Fig. 2A). Accounting for the adult female mortality rate, the decline from the natality rate to the fall calf:cow ratio equates to 26% survival of the 2010 cohort to September. Calf survival has averaged 28% over the last 7 years, compared to 15% during 1991-2003. Given the calf sex ratio (Table 1), it was estimated that approximately 13 female calves were recruited per 100 older females, nearly offsetting the 16% losses of adult females over the previous year, thus resulting in continued stability of the female segment of the herd.

Female Survival and Age Structure During October 2009 – September 2010, 11 radiocollared females from the age-structured sampled died for an annual mortality rate of 16%, higher than the study average of 12% (range 2-23%). The higher rate during this study period can be attributed in part to the preponderance of older females in the population in that 4 of 11 caribou that died were ≥ 14 years old. The female age structure in May 2010 (Fig. 4) exhibits the effects of improved recruitment over the last 6 cohorts, as well as the losses of females ≥ 13 years old, and as a result the proportion of these older females has declined over the last few years (Fig. 5).

The adult female mortality rate has varied from an average of 7% during 1986-89 when the herd was growing at 8%/year to an average of 19% during 1989-93, the period of severe winters and marked herd decline of 10%/year. Since about 2000, mortality rates for adult females have averaged 13% in spite of mild to average winter conditions. This higher mortality in the last decade has largely been due to age structure that was strongly skewed toward older females and the losses of most of these old females during this period.

Adult Bull Survival During September 2007- September 2010, we have captured, radiocollared and monitored 133 male caribou including 97 captured as adults (≥ 1 year old; 45, 12, 15, and 25 captured in September 2007-10, respectively) and 36 captured as 10-month-old calves (12 each March 2008-10). As of 30 September 2010, 70 were still alive with functioning radios, 45 have died, 9 had their collars torn off during the rut, and 9 radiocollars have failed prematurely. Suspected causes of death included wolves (21), bears (9), unknown large predator (7), unknown (6), and capture-related (2).

During the 3 years we have evaluated survival of males (October 2007 – September 2010), annual survival has averaged 0.74, substantially lower than the average 0.88 estimated for adult females throughout the study. Although sample sizes for individual ages for are small, age-specific survival appears to be highest through to about 5 years of age, averaging 0.84, then clearly declines for older age-classes (Fig. 6). Mortalities predominantly occur during August – November, with very few mortalities

Denali staff conducted ground-based Dall's sheep surveys on July 20, 2011 on Igloo Mountain, Cathedral Mountain and Tattler Creek. These surveys classified 49 sheep. The lamb productivity estimate is 39 lambs per 100 ewes, similar to estimates of 40 lambs per 100 ewes in 2008 and 28 lambs per 100 ewes in 2009, but somewhat larger than the 2010 estimate of 29 lambs per 100 ewes. It should be noted that the 2011 survey was conducted later in the year than previous surveys (mid-July versus mid-June) in an effort to coincide with the timing of the Central Alaska Network Inventory and Monitoring aerial sheep surveys. In addition, due to logistical constraints, the overall area covered and number of sheep sampled during the ground survey was less in 2011 than in previous years (2008: n=177, 2009: n=136, 2010: n=184, 2011: n=49).

Grizzly bear monitoring – West. This long-term study on the north side of the Alaska Range focuses on a sample of grizzly bears between the Muldrow Glacier and the Herron River. Radio-collared females are located from den emergence in spring, to the end of September, to locate and follow the survival of the sows and their cubs. Since 2009 this project has been winding down as the park transitions into a new bear study area (see Grizzly bear monitoring – North, below). Collars are being removed as they come due for replacement and efforts move to the new study area and new objectives.

Bear capture was conducted on May 24, 2011 from a helicopter, with fixed-wing aircraft support. Wildlife staff removed collars from 3 female grizzly bears. For the 2011 season, wildlife staff followed 3 remaining collared bears (all female) for most of the season.

At den emergence, of 6 bears, two sows were accompanied each by twin yearlings, and a third sow started the season with 3 three year olds. The remaining three sows did not have young. The twin yearlings of one sow were still alive by mid-summer. The fate of the remaining 2 litters could not be determined since the sows' collars were removed in May.

Plans for 2012 are to remove the remaining 3 radio collars from female grizzly bears in this study area thus bringing this study to a close.

Grizzly bear monitoring – North. The transition to a new grizzly bear monitoring study was begun in 2009. The new study area in on the north side of the Outer Range Mountains between the Kantishna Hills and the east park boundary. The objective of this study is to document ecology of grizzly bears and movements on the northeast side of the park especially outside the north park boundary where they may be subject to legal harvest and possible future predator control efforts by the State of Alaska. GPS collars are being deployed in an effort to determine bear habitat use in relation to human use and possible climate-induced changes in vegetation patterns.

Bear capture was conducted on May 22, 23, and 25, 2011 from a helicopter, with fixed-wing aircraft support. A total of ten bears was captured, three females and seven males. Seven bears were captured for the first time, and 3 were recaptured. Four bears were fitted with GPS radio collars (3 males, one female), while six (4 male, 2 female) received VHF collars.

Five females produced a total of 8 cubs in 3 litters of twins and two litters of single cubs. One female had one yearling. Bears were radio tracked one to two times per month starting in May and will continue to be radio tracked at the same interval through November. No bears were located outside the park boundary on any flight. Finer resolution GPS data will not be available until September 2012 when GPS collars are scheduled to release. Travel by bears outside the park boundary will not be verified until after that time. There are currently 22 bears, 16 wearing GPS radio collars and 6 wearing conventional VHF collars in the study. Radio tracking flights were conducted in late Fall 2010 to locate den sites.

Plans for 2012 are to replace any dropped collars and check the fit of collars on young bears and add